

A STRATEGY FOR MONITORING  
THE PAYETTE NATIONAL FOREST  
LAND AND RESOURCE MANAGEMENT PLAN

by

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A STRATEGY FOR MONITORING THE PAYETTE NATIONAL FOREST  
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ABSTRACT: Management of national forests evokes controversy about the allocation of limited resources among competing uses. A Land and Resource Management Plan (Forest Plan) has been prepared for the Payette National Forest. The Forest Plan describes resource management practices and the levels of resource production at which the Forest would be managed.

Monitoring whether plans are implemented as designed and whether environmental effects are as predicted has been described as a weak link in environmental analysis. Monitoring will assist in furthering the understanding of the effects of producing multiple resources in the national forests. Major laws that are applicable to monitoring the Payette Forest Plan include the National Environmental Policy Act, the National Forest Management Act, the Clean Water Act, the Clean Air Act and the National Historic Preservation Act.

The Payette National Forest - Forestwide Action Monitoring Plan has been prepared to provide guidance to resource managers on incorporating monitoring into projects. The results of monitoring will be used to assess whether the Forest Plan is implemented as designed and if the environmental effects are occurring as predicted. Actions that could be recommended include: no action, referring the problem to the appropriate individual for improvement of management practices, modifying the management practices as a Forest Plan amendment, revising the cost per unit output or initiating revision of the Forest Plan.

INTRODUCTION

Beginning with the establishment of national forests to protect future timber supply and watersheds by the Organic Administration Act of 1897, management of national forests has been controversial (Clawson 1975). National forests offer a variety of resources; including outdoor recreation, range, timber, watershed and wildlife and fish. Resources, according to Zimmerman (1933), are those physical components of the environment which humans have placed a value upon due to their usefulness to humans. The very nature of resources, particularly multiple resources on public lands, evokes controversy about the allocation of limited resources among competing uses.

The Multiple-Use Sustained Yield Act of 1960 set the stage for planning resource use by mandating national forests to manage all renewable resources of the forests, "...so that they are utilized in the combination that will best meet the needs of the American people...{Section 4 (a)}." Additionally, the Act requires management of these "products and services" at a level that they can be sustained in perpetuity "...without impairment of the productivity of the land {Section 4 (b)}." While the Act provided multiple-use and sustained yield goals for national forests, it offered little direction to forests on achieving these goals.

The multiple resource planning effort for national forests was furthered by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA). RPA was based on the finding that "...the management of the Nation's renewable resources is highly complex and the uses, demand for, and supply of the various resources are subject to change over time... {Section (2)(1)}." The Act required preparation of a "Renewable Resource Assessment" every 10 years to assess the demand and supply of the national forest resources {Section (3)}. Forest managers were instructed to prepare land management plans for subunits of national forests using a "systematic, interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences {Section (5)(b)}."

The National Forest Management Act of 1976 (NFMA) built on the concepts of multiple-use, sustained yield and comprehensive land management planning from the previous acts. A major change with NFMA was development of one integrated management plan for each national forest as opposed to the previous unit plans which there were several per forest. Specific management requirements are also required by NFMA such as identifying lands suitable and not suitable for timber production and providing for a diversity of plant and animal species.

With the passage of NFMA came the recognition of increasing competition among resources uses of the national forest. Management activities that benefit one resource often have negative effects on others. All uses of the forest cannot be produced in the same area. For instances, wilderness is incompatible with timber harvest and vice versa. However, many uses can be produced concurrently in the same area. Some outdoor recreation opportunities are compatible with timber harvest. Where there are multiple-uses of resources in an area, the understanding of the effects of production of one resource on the other resources of the area are often unknown.

The combination of resource use and management that fulfills NFMA goals to provide "the greatest good for the greatest number in the long run" is difficult to achieve. "Availability for human use, not mere physical presence, is the chief criterion of resources. Availability, in turn, depends upon human wants and desires (Zimmerman 1933)." If every human had the same wants and desires, resource allocation decisions would be relatively easy. However, humans have different interests in the management of the multiple resources of the national forests. Exploitive economic interests that prefer utilization for profit often conflict with conservative ecological interests that prefer utilization of resources in a manner that protects them from waste and harm. Appeasing both interests simultaneously is an arduous, if not impossible, task.

In an attempt to achieve the goal of "the greatest good for the greatest number in the long run", NFMA directs forests to prepare land management plans with the use of an interdisciplinary team to address multiple-use concerns {Section 6 (f)(3)}. The interdisciplinary team consists of representatives from cultural resources, soil, hydrology, outdoor recreation, fisheries, minerals, wildlife, timber, engineering and planning.

Forests are also required to involve the public in the planning process; ensuring that the Forest Service fully understands the needs, concerns and values of the public {Section (6)(d)}. Recognizing the public is a diverse sector, there are many views of desired management of the forest. To address these varied views of forest management, NFMA requires forests to examine alternative scenarios of management activities and analyze the environmental effects of the various alternatives upon the physical, biological and social environment. The alternative that best meets the multiple wants and desires of the American people, to the extent possible, becomes the Land and Resource Management Plan (Forest Plan). There are no "right" answers to forest planning, only difficult choices.

Forest Plans guide management by defining multiple-use goals and objectives and the management standards and guidelines to achieve them. Goals are broad definitions of the end condition to which the Forest is striving to attain while objectives are more specific means of achieving the goal. Resource standards and guidelines (hereafter referred to as standards) are specific management practices for accomplishing goals and objectives. Standards consist of mitigation measures and resource management levels which include policy and legal requirements (U.S.D.A. Forest Service 1988).

The Forest Plan for the Payette National Forest, Intermountain Region, Idaho was approved for implementation by the Intermountain Regional Forester on May 6, 1988. It describes resource management standards, levels of resource production and management, and the availability and suitability of lands for resource management. The Payette Forest Plan, like all forest plans, is centered around controversy. The amount of timber to produce, where to produce it and to what extent to allow impacts on other resources are the principle conflicts. The Forest Plan by no means resolved the resource allocation

issues, rather the activity level and standards at which the forest is managed was a compromise of the opposing interests (U.S.D.A. Forest Service 1988).

Assessment of whether the Forest Plan is implemented as planned and whether Forest Plan standards are appropriate for NFMA compliance are essential components to forest planning. Monitoring seeks to determine "how adequately resource policies, programmes and projects work, and what variables account for their (lack of) success (Mitchell 1979)." Monitoring notes deficiencies which might be resolved or avoided in future decisions and future planning efforts (Holling 1978). Identifying deficiencies assist managers in understanding if the assumptions and predictions that were the basis for the Forest Plan are accurate. As previously noted, there is a lack of full understanding of resource yields and joint resource production relationships. Monitoring will assist in furthering this understanding. Additionally, monitoring assists in building a trust between the public and forest managers regarding implementation of the Forest Plan in which they have vested interests.

The lack of monitoring of policies, programs and projects has been described as the weak link in environmental analysis (Holling 1978, Lee and Koumjian 1978, Mitchell 1979, Walther, et.al. 1988 and Westman 1984). Holling (1978) points out that continuation of analysis during and after the activity is a necessary change "to shift assessment from its traditional role into meaningful environmental management." Westman (1985) notes: "While impact assessment has normally been conceptualized as stopping at the point of communicating findings and recommendations to decision makers, the full realization of environmental protection goals necessarily involves continually monitoring predicted effects and modifying actions as the result of findings."



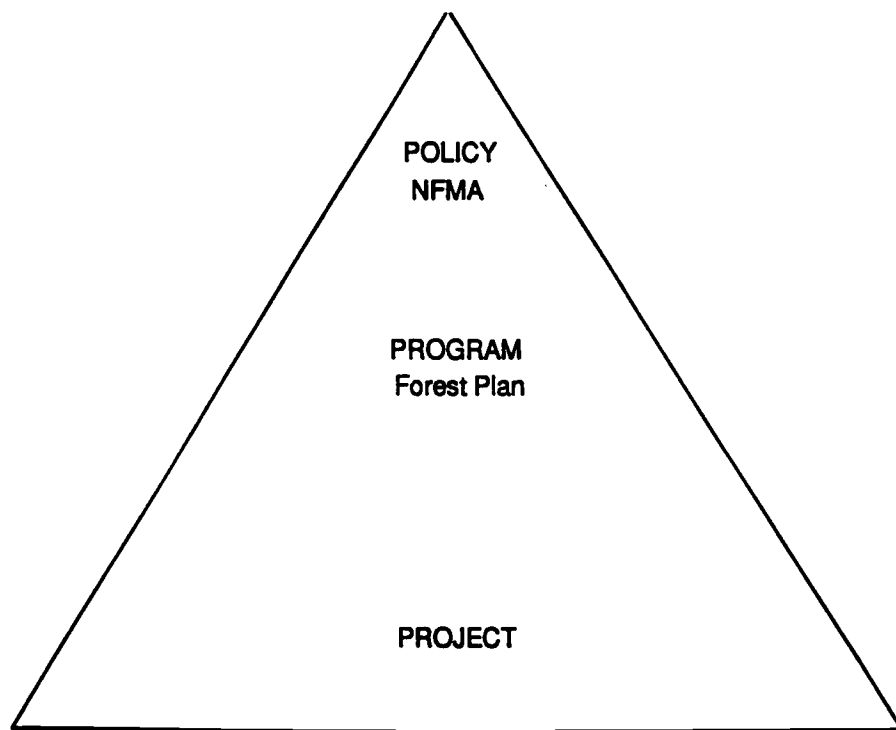


Figure 1. Levels of Monitoring.

Forest Plan monitoring provides information for all levels of monitoring; policy, program and project. (See Figure 1. Levels of Monitoring.) The Forest Plan is a programmatic document, a link between NFMA policy and site-specific projects. Monitoring projects (such as campground construction and timber sales) and the effects of projects provides a basis for evaluating the Forest Plan. Evaluation of the Forest Plan will, in turn, provide a basis for assessing NFMA policy.

### OBJECTIVES

The objectives of this paper are fourfold. First, the legal requirements of monitoring that pertain to Payette Forest Plan will be identified. Next will be a description of the the process used in developing a multiple-use monitoring plan for the Payette National Forest. Following will be a description of the process that will be used by the Forest for evaluating the monitoring results and making recommendations. Finally will be a categorization of the monitoring that elaborates on the applications.

### REVIEW OF LAWS AND REGULATIONS

Major laws applicable to monitoring the implementation of the Payette Forest Plan include the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Clean Water Act, the Clean Air Act and the National Historic Preservation Act.

#### National Environmental Policy Act of 1969 (NEPA)

The National Environmental Policy Act set admirable and arduous goals for the nation. The purpose of the Act is:

To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will

prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation... {Section 2}.

One of the tasks required by NEPA is an assessment of the impacts for all major federal actions. The primary goal of NEPA is to fully disclose potential impacts of a federal project or programmatic plan and to modify the project, where practicable, to mitigate these impacts.

In order for agencies to determine if identified mitigation measures are implemented and effective at reducing impacts, NEPA Regulations {40 CFR} direct federal agencies to document within the Record of Decision for the planned project "a monitoring and enforcement program... where applicable for any mitigation {40 CFR 1505.2 (c)}." (The Record of Decision documents the decision made by the deciding officer.) In addition to monitoring the implementation of mitigation measures, NEPA Regulations also state that federal agencies "...may provide for monitoring to assure that their decisions are carried and should do so in important cases {40 CFR 1505.3}."

Monitoring plays a basic role in fulfilling the philosophy of NEPA. It will assure whether mitigation efforts are effective to "...prevent or eliminate damage to the environment or atmosphere." It will also provide "...to enrich the understanding of the ecological systems and natural resources important to the nation." Through monitoring there will be increased understanding of the environment we live in, how we alter the environment and how to mitigate the negative impacts of our actions (Holling 1978 and Westman 1984).

#### National Forest Management Act of 1976 (NFMA)

As previously mentioned, NFMA guided the forest planning process. The Act also mandates evaluation of forest plans "...based on continuous monitoring and

assessment...of the effects of each management system {Section 6(g)(3)(c)}."

This evaluation is to assure that the forest is achieving the goals and objectives of the Forest Plan and resource management practices "....will not produce substantial and permanent impairment of the productivity of the land {Section 6(g)(3)(c)}."

NFMA Regulations supplement the direction to forests to monitor their actions and evaluate "...on a sample basis to determine how well objectives have been met and how closely management standards have been applied {36 CFR 219.12 (k)}." The evaluation of monitoring data will be the basis for instigating "...changes in management direction, revisions, or amendments to the forest plan... {36 CFR 219.12 (k)}."

NFMA Regulations also provide a broad description on monitoring items to include in the forest plan monitoring program. These items include:

- (1) A quantitative estimate of performance comparing outputs and services with those projected by the forest plan;
- (2) Documentation of the measured prescriptions and effects including significant changes in productivity of the land; and
- (3) Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the forest plan. {36 CFR 219.12 (k)}

Generally, the monitoring direction provided by NFMA is unclear on what to monitor and why. The discretion has been given to the individual national forest to identify monitoring items that relate to their specific issues, planned outputs and effects. The Regulations are more specific in identifying four items that examine implementation of some of the timber resource concepts of NFMA. Monitoring is required for determining: (1) if forest lands are adequately restocked, (2) what lands are suited for timber production, (3) if the maximum size limits for harvest areas are practical, and (4) the level of

insect and disease activity following management activities {36 CFR 219.12 (k)(5)}.

Included within the Regulations is direction on describing monitoring in the Forest Plan. A description of the monitoring items is documented in Chapter VI of the Payette Forest Plan (U.S.D.A. Forest Service 1988). In accordance with the regulations, this description encompasses:

- (i) The actions, effects, or resources to be measured, and the frequency of measurements;
- (ii) Expected precision and reliability of the monitoring process;
- (iii) The time when the evaluation will be reported.{36 CFR 219.12 (k)(4)}

While Chapter VI provides an overall description of monitoring to be accomplished on the Payette National Forest, it does not provide adequate direction for those responsible for implementing the Forest Plan to incorporate monitoring into project implementation. This lack of direction is the primary impetus behind the preparation of the Forestwide Monitoring Action Plan that is displayed in Appendix A.

#### Clean Water Act of 1977

Water quality monitoring is the most comprehensive monitoring task on the national forests. Forest management activities; e.g. road construction, timber harvest, livestock grazing, mining, recreation facilities, etc., often result in nonpoint source water pollution. Nonpoint source water pollution originates from diffuse sources and normally is associated with runoff, precipitation, atmospheric deposition or percolation that result from management activities.

Nonpoint source water pollution results in alterations to the natural chemical, physical, biological, and radiological integrity of the water (Clark 1990). Changes in these characteristics can result in impacts to the beneficial uses of the water. Beneficial uses of water include; agricultural,

industrial and domestic water supply, cold and warm water biota, recreation and salmonid spawning, overwintering, emergence and rearing habitat (Clark 1990).

The Federal Water Pollution Control Act Amendments of 1972, often referred to as the Clean Water Act, provides direction to the States to implement clean water standards, including nonpoint source pollution controls. Section 313 of the Act states that federal agencies shall comply with the state in promulgating the Act. Additionally, Section 319 requires monitoring to determine the effects of management practices on beneficial uses in order to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife."

The Idaho Department of Health and Welfare (IDHW) has been designated the lead agency in Idaho for developing a state-wide water quality monitoring plan. IDHW's responsibilities include "coordinating monitoring programs, development of instream criteria, evaluation of impacts to beneficial uses and administration of the state water quality standards (Clark 1990)." Instream criteria are water quality standards developed by the State to protect the beneficial uses of the water and to provide a threshold level for development and monitoring of mitigation measures.

The State identifies three types of water quality monitoring; trend, beneficial use and best management practices (BMPs) effectiveness. Trend monitoring involves data being collected at a given location by using consistent measurement techniques for a long time period. The goal is to detect long-term trends and to assess the magnitude of the trends. The majority of this monitoring is not conducted by the Forest Service but rather is the responsibility of the state and the U.S. Geological Survey.

Beneficial use monitoring consists of measuring parameters that have the potential to affect the beneficial use. The parameters depend upon the

beneficial use being examined; for instance, sedimentation, water flow regimes, temperature, large woody debris, are all examples of parameters that affect salmonid populations.

The premise behind beneficial use monitoring is the feedback look. The feedback look is a process for managing nonpoint source pollution through implementation of mitigation to protect soil and water resources and, thus, beneficial uses. Mitigation measures are implemented on the ground on a site specific basis. The effectiveness of the mitigation measure is evaluated through instream monitoring and modified as needed to achieve instream water quality criteria (Figure 2).

BMP effectiveness monitoring is an assessment based on several types of monitoring including on-site BMP implementation and effectiveness, pollutant source and transport, and the status of instream beneficial uses. The monitoring results will be used collectively to assess "...the effect of the nonpoint source activity on existing beneficial uses of water...(Clark 1990)."

Coordination and agency responsibilities for monitoring water quality between the Payette National Forest and IDHW are outlined in the Memorandum of Understanding (MOU) Implementing the Water Quality Program on the National Forests in the State of Idaho, Memorandum of Understanding between the Payette National Forest and Idaho Department of Health and Welfare Division of Environmental Quality, and in IDHW's Coordinated Nonpoint Source Water Quality Monitoring Program for Idaho (Clark 1990). Forest Service responsibilities include:

- Implement the feedback look concept including monitoring, comparison of the resulting data to instream criteria and adjusting mitigation measures (BMPs) where necessary.

- Annually review a representative sample of timber-related projects and write evaluation reports which are distributed to IDHW.

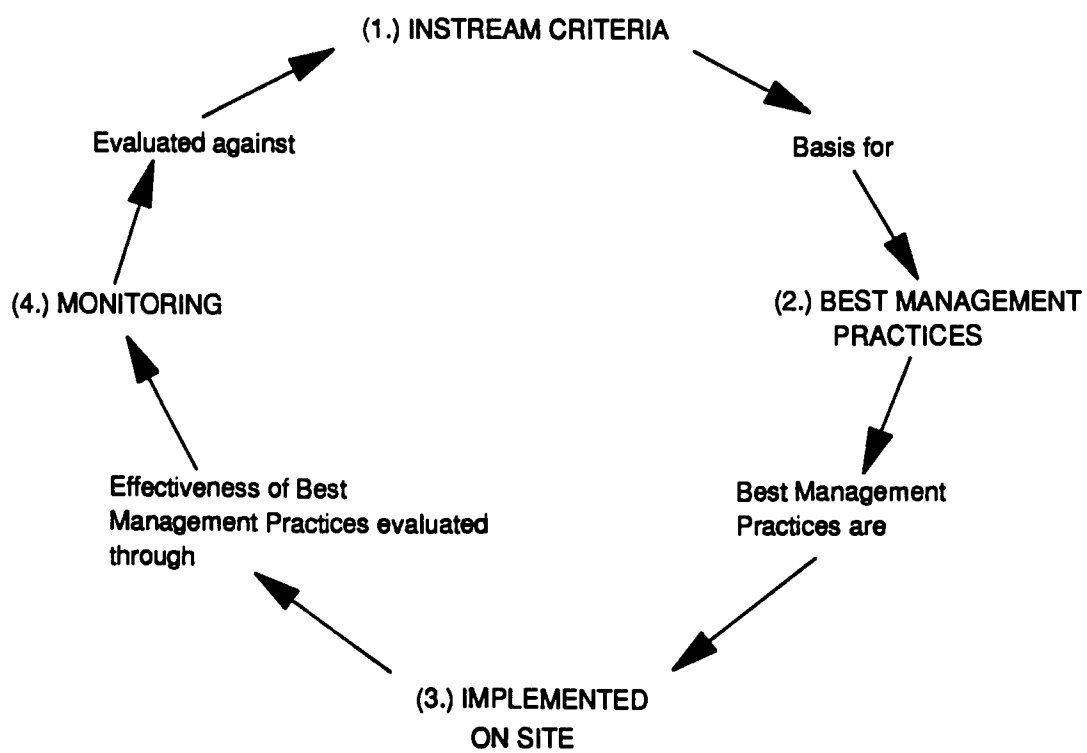


Figure 2. Water Quality Feedback Loop.



-Annually provide information to IDHW on instream monitoring and evaluation efforts, research results, and evaluation of BMP effectiveness.

#### Clean Air Act Amendments of 1977

One of the purposes of the Clean Air Act was "to preserve, protect, and enhance the air quality" in national wilderness areas {Section 160}. The Act provides direction to the state to protect air quality in these areas. IDHW is the lead agency in Idaho for administering the Clean Air Act. Federal compliance with the state in promulgating the Act is required under Section 118. Monitoring of air quality is specifically addressed in an MOU between IDHW and the U.S.D.A. Forest Service Intermountain Region. The MOU requires both agencies to develop air pollution control monitoring and abatement programs in Class I and Class II areas.

Wilderness areas established prior to the enactment of the Clean Air Act were designated by the Act as Class I areas. Class I designation limits the impairment of visibility in the area from manmade pollutants. The Act requires prevention of future impairments and correction of existing impairments {Section 169(a)}. In addition to visibility, the Forest Service identifies other Air Quality Related Values which include: flora, fauna, soil, water, aquatic life, geologic and cultural features. All of these items can be negatively affected by a deterioration of air quality. The Payette National Forest administers one Class I area; the Hells Canyon Wilderness.

Wilderness areas designated after establishment of the Act are designated as Class II Areas. Class II designation of wilderness areas requires the maintenance of air quality. The remaining national forest is designated as Class II areas with a requirement to minimize deterioration of air quality {FSM 2120.43 and 2323.64}. The Frank Church--River of No Return Wilderness,

administered partially by the Payette National Forest, has been designated as a Class II wilderness area.

Monitoring of air quality in the Frank Church--River of No Return and Hells Canyon Wilderness Areas is necessary to determine if the Class I and Class II air quality goals are achieved.

#### National Historic Preservation Act Amendments of 1980

The National Historic Preservation Act makes federal agencies responsible for preservation of historic properties. The agencies are required to locate, inventory and nominate eligible properties to the National Register {Section 206}. In order to perform this task, all ground disturbing projects on Forest Service lands (e.g. timber harvest, road construction, wildlife burns, mining activities, campground construction) and structural modification projects are inventoried for cultural resource values. All identified cultural resource properties are avoided during the ground disturbing project or mitigated by excavation. Protection of the cultural properties from the ground disturbing project requires monitoring of the project both during and after the activity.

#### METHODOLOGY USED IN DEVELOPING A MONITORING PLAN

The Forest Plan identified activities, practices or environmental effects to be monitored; however, the monitoring listed in the Forest Plan was broad and generic. Resource managers need more specific guidance on how to incorporate monitoring into projects. The purpose for developing the Monitoring Action Plan was to provide more specific direction to the Forest Plan monitoring strategy by answering the questions:

-What exactly will be monitored? Is the item monitored by a specific analysis area? for a particular activity? for a particular practice?

-Why is the item monitored? Is it required by law or for other reports?

- How will the information be used?
- How will the information be gathered?
- Who is responsible for collecting information? analyzing? reporting?
- When will the information be gathered?
- Where will the information be gathered?

Following is a description of the steps that were taken to answer these questions.

#### Developing a Monitoring Format

The initial step in developing a monitoring plan was to visit with other National Forests to review documentation of their monitoring efforts, including process and results. Monitoring plans and/or results of the Nez Perce, Targhee, Bridger-Teton and Challis National Forests were reviewed. The forests were chosen based upon their proximity to the Payette National Forest and the status of their Forest Plan implementation.

The purpose of this consultation was to glean information that would be applicable to the Payette's monitoring efforts. The forests provided information on method effectiveness and suggested problems to avoid. Based upon advice from the forests and internal discussion, a monitoring form and procedure for obtaining the needed information was developed.

#### Resource Coordination

Once a format was developed, meetings were arranged with resource specialists and management staff. The meetings consisted of both individuals and groups depending on the scope of the topic. The purpose of the meetings was to identify the detail necessary to answer the questions raised above. Additionally, monitoring items were reviewed to assess whether they addressed

applicable laws, management goals and objectives and/or standards. For some monitoring items, detail is not available until the item is funded at which time specific monitoring sites and techniques must be identified.

Because of the interrelationships among some resources, extensive time was spent coordinating monitoring activities among resources. For instance, fish habitat is dependent upon water quality and stream channel conditions. Fisheries, soil and water monitoring were closely coordinated to assure that the data obtained from monitoring activities would accommodate all resource concerns and would reflect their interrelationships.

#### Documenting the Monitoring Process

Once the specific monitoring direction and processes were identified, the information was documented in the monitoring form by the author. These monitoring forms are the basic components for the Payette National Forest - Forestwide Monitoring Action Plan displayed in Appendix A. In addition to the process identified for specific items, processes were established for implementing monitoring on projects and incorporating monitoring into the budget and workload planning.

The Forestwide Monitoring Action Plan will guide the Forest in accomplishing its monitoring program. It is now the responsibility of those implementing the forest Plan to accomplish the required monitoring and report the results.

#### EVALUATION PROCESS

Monitoring is not completed until the results are analyzed, evaluated and applied to land management decisions. Figure 3 displays the feedback loop process used to incorporate monitoring into decisions.

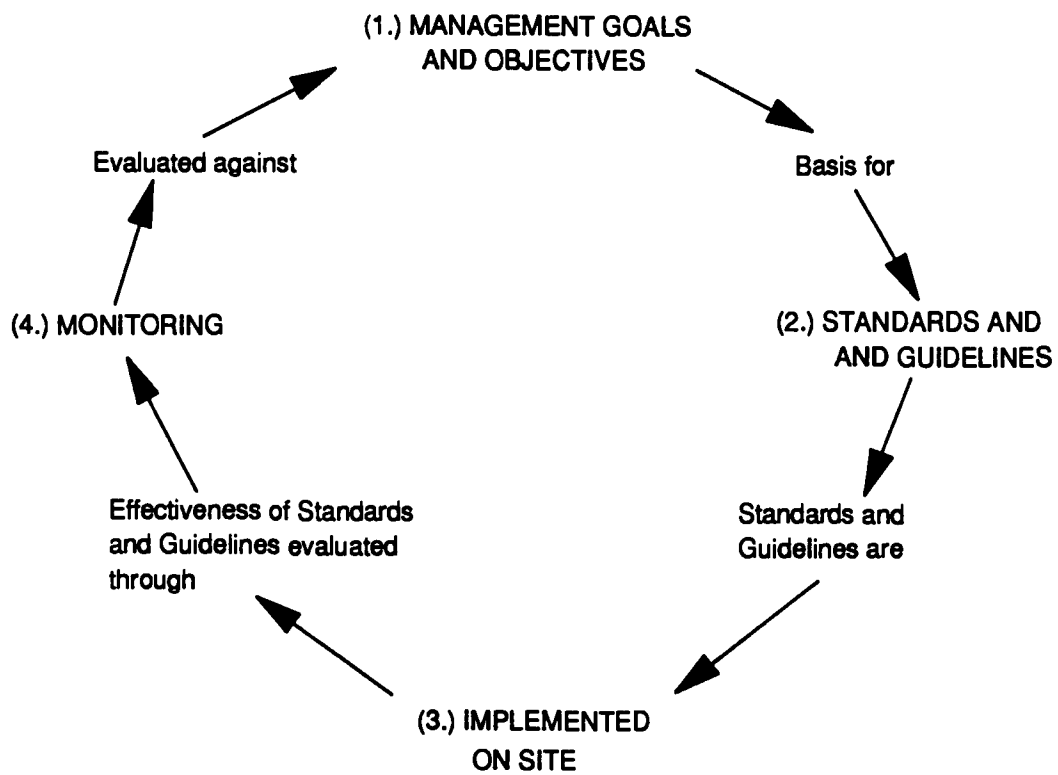


Figure 3. Monitoring Feedback Loop.

### Analyzing and Evaluating Monitoring Results

Data and information obtained from monitoring will be analyzed by the Forest interdisciplinary team with a systematic technique. The results of the analysis will be used to evaluate the activity, practice or effect.

"Evaluation implies judgements. Judgements assume standards or criteria which are operationalized through indicators and thresholds (Westman 1985)". The Forestwide Monitoring Action Plan displayed in Appendix A establishes thresholds for reevaluating the Forest Plan goals and objectives, standards and assumptions for each monitoring item.

Where applicable, there will be an assessment of the cost associated with the activity. The evaluation will include examining if the actual cost reflects the Forest Plan predicted cost, if the activity is included in the budget and if the cost is adequate for performing the activity. The evaluation will be the basis for recommending an action.

While each resource specialist analyzes and evaluates the monitoring for their resource, the final evaluation for all monitoring items will be conducted by the entire Forest interdisciplinary team. The entire team identifies and discusses conflicts among resource uses and then recommends actions to the Forest Supervisor. The Forest Supervisor is responsible for the final recommendations.

### Recommending Actions

If monitoring results illustrate that an activity is not being implemented as planned, corrective action should be taken. Possible actions include:

- No action. The results of monitoring shows that the Forest Plan is being implemented as planned or there is an insignificant difference.
- Referring the problem to the appropriate individual for improvement of management practices.

- Modifying the management practice as a Forest Plan amendment.
- Revising the cost per unit output.
- Initiating revision of the Forest Plan.

The interdisciplinary team or Forest Supervisor may recommend no action if monitoring shows that the Forest Plan is implemented as designed or if there is an insignificant difference between the Forest Plan projection and actual achievements. These conditions, however, do not necessarily imply that no action will be the recommendation. Circumstances may exist where a resource standard is implemented as planned but resource interrelationship results in other resource standards not being achieved. For example, wildlife standards require a designated forage-cover ratio for elk habitat. Harvesting timber affects the forage-cover ratio. While it may be possible to achieve the planned outputs of timber harvest, it may not be possible to concurrently achieve the wildlife standards in terms of the forage-cover ratio. These interrelationships need to be closely examined before an action is recommended.

If standards are not being implemented as planned on a project, the problem may be referred to the appropriate individual(s) for improvement of the application of the practice. For monitoring to be effective, monitoring results should lead to a dynamic process of changing the way activities and practices occur on the ground. During project monitoring, if a project is in noncompliance with standards, it should be remedied immediately.

In the evaluation process, resource specialists will review the Forest Plan projected costs and compare these to the actual and budgeted costs. If the standard and guideline is not achieved for a resource, specialists should evaluate if it was due to the lack of funding. In this case the cost per unit output may be revised in order to provide for sufficient funding to complete a

project or activity to full standards. Even if standards are achieved the cost should be evaluated to determine if the cost is adequate.

Monitoring will alert the Forest to the need for Forest Plan amendment or revision. If monitoring results illustrate that outputs and effects are significantly different from what was projected in the Forest Plan, the Forest interdisciplinary team and/or the Forest Supervisor may recommend an amendment or revision of the Forest Plan. Amendments are insignificant changes to the Forest Plan such as revising or refining the standards for a resource. Revisions encompass significant changes to the Forest Plan in terms of modifying the management goals and objectives. Forest Plan revision would require completion of the planning process as described in NFMA.

#### Reporting Results and Actions

A formal review of the Payette Forest Plan is required by NFMA at least every five years. An evaluation report based on monitoring results will be prepared and submitted to the Regional Forester and available to the public at the end of years 1993 and 1998. In the interim, a full evaluation report will be prepared and submitted only if there should be a need for revising the Forest Plan. However, the results of the monitoring and actions taken will be summarized annually for selected activities, practices and effects based on issues and potential resource conflicts.

#### CHARACTERIZATION OF MONITORING

Forest Plan monitoring can be characterized into three categories; implementation, effectiveness and validation (USDA Forest Service In Draft and USDA Forest Service 1988).



### Implementation Monitoring

The main objectives of implementation monitoring is to evaluate whether or not Forest Plan resource standards and projected outputs, accomplishments and costs are implemented as planned. Monitoring resource standards implementation includes a qualitative assessment of whether the standards and project specific plans are implemented on projects.

The project administrator accomplishes the most common form of project implementation monitoring on all projects. Project administrators are responsible for administering project contracts or overseeing the project if accomplished with no contractor. The administrator reviews the project before, during and after completion of the project. Although this method of monitoring is effective in correcting problems early in the implementation phase, the project administrator often lacks the professional knowledge of all standards and how they should be implemented.

A second form of project implementation monitoring consists of field reviews by an interdisciplinary team. Reviews are accomplished on a sample of land management activities. The primary objective of interdisciplinary reviews is to determine not only if practices are applied, but correctly applied. In the event of incorrect or inappropriate application of standards, the cause will be identified along with corrective or preventive actions to be taken.

Most field reviews will not involve all resource specialists but rather only those whose resource is being reviewed. Resource specialists will choose which projects to review. The selection process will included an assessment on whether the resource was an issue for that particular project. For example, if soil compaction is not an issue for a timber sale then the limited amount of monitoring for soil compaction would be more effective on a project that has a greater risk of not achieving soil standards.

Few field reviews of projects include the entire interdisciplinary team. Full team reviews help to highlight conflicting resource standards and evaluate the overall Forest Plan implementation process, in addition to evaluating achievement of Forest Plan standards.

### Effectiveness Monitoring

The objective of effectiveness monitoring is to determine and demonstrate if project plans and standards are effective at achieving Forest Plan goals and objectives. The intent is to focus on cause and effect relationships between the activity and its effect on the resource. As a general rule, effectiveness monitoring is quantitative and focuses on the least complicated measurements with observations close to the disturbance.

Evaluating the effectiveness of land management practices requires monitoring over time. The effects of many practices are apparent only over a long time period. The cumulative effects of multiple activities over time and space may have an effect on a resource that would not be apparent if individual activities are monitored at one point in time.

Due to the longer monitoring time period and more quantitative, intensive measures, effectiveness monitoring requires more time and funding than implementation monitoring. For these reasons, effectiveness monitoring is generally concentrated in high risk areas, sensitive areas or areas where the effect of land management practices are not completely known. By placing monitoring priorities, money and personnel can be directed to assess the effectiveness of practices in areas where monitoring would have the greatest return of knowledge.

### Validation Monitoring

Validation monitoring is the most intensive level of monitoring. It reviews the various analytical assumptions and tools used in forestwide and project planning. The purpose is to determine whether coefficients, predictive relationships, models and standards are sufficient to meet policy, laws, regulations and Forest Plan goals and objectives.

### DISCUSSION

Monitoring offers a new tool for the Forest Service to examine it's management practices. It will provide the agency with a better understanding of the conflicts confronted with multiple-use resource management and may offer better solutions to mitigate those conflicts. Monitoring items and procedures need to be constantly reassessed to assure that they are adequate for addressing applicable laws, planning assumptions, goals and objectives and public interests.

The question remains on how committed the agency is to monitoring it's actions. The Forest Service has been criticized because monitoring has traditionally been the first item to be cut from the budget while programmed outputs, such as timber harvest, are usually preserved. The Forest Plan states that projects will not be implemented unless they can be properly monitored (U.S.D.A. Forest Service 1988). However this is a nebulous statement, leaving the reviewer questioning what is "proper" monitoring. The Payette National Forest has included funding for project monitoring (which includes implementation and some effectiveness monitoring) in with funding for projects. Funding, however, does not assure that monitoring will be accomplished. Accomplishment of monitoring is the responsibility of those

implementing the Forest Plan and will take a commitment from management to assure that it is accomplished.

Forest Service Chief, Dale Robertson, stressed the need for monitoring to assure compliance and adequacy of Forest Plan standards. In a letter dated February 23, 1990 to the Regional Foresters, Robertson states:

"Monitoring and evaluation are essential activities to ensure both that the standards and guidelines have been properly set and that they are being met. There should be no doubt in anyone's mind about which takes precedence if there is a conflict between standards and guidelines and program output; we expect every project to be in full compliance with standards and guidelines set forth in Forest Plans (Robertson 1990)."

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**APPENDIX A**  
**PAYETTE NATIONAL FOREST**  
**FORESTWIDE MONITORING ACTION PLAN**

**PAYETTE NATIONAL FOREST**  
**FORESTWIDE MONITORING ACTION PLAN**

Draft April 13, 1990  
Prepared by Joyce Thompson

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## MONITORING AND THE FOREST PLAN

The Payette National Forest Plan was approved by the Regional Forester on May 6, 1988. The Forest Plan guides all natural resource management activities by providing goals and objectives and establishing management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. This Plan will guide management of the Forest for 10 to 15 years unless conditions or demands significantly change.

Monitoring, gathering information and observing management activities, will provide a basis for periodic evaluation of Forest Plan goals and objectives. **Monitoring is a crucial component of Forest Plan implementation.** The results of monitoring will be evaluated to determine if the Forest Plan is being implemented as planned and if the predictions of the environmental conditions in the area covered by the Forest Plan are accurate.

National Forest Management Act (NFMA) Regulations {36 CFR (code of federal regulations) 219}, which guided the process of forest planning, provide for direction for monitoring and evaluation. The Regulations state:

...Implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied. {36 CFR 219.12 (k)}

This monitoring action plan is a refinement of the monitoring listed in the Forest Plan Chapter V. The monitoring listed in the Forest Plan was broad and generic. Resource managers needed more specific guidance on how to implement monitoring. More specific direction has been added to the Forest Plan monitoring including:

What exactly will be monitored? Is the item monitored by a specific analysis area? for a particular activity? for a particular practice?

Why is the item monitored? Is it required by law or for other reports?

How will the information be used?

How will the information be gathered?

Who is responsible for information collection? analyzing? reporting?

When will the information be gathered?

Where will the information be gathered?

Some of this information, particularly specific locations and techniques, is not available at this time for some items because the monitoring item has not been funded or the information is not available until project implementation. More detail will be described when funding is obtained for the monitoring item or a project is implemented that will require monitoring.



In addition to refining the monitoring information, duplicated monitoring items have been combined and items that were an action or activity and not monitoring were eliminated from the plan.

This monitoring action plan is designed to be dynamic. Ideally, it should be updated annually to include more specific information as the item is funded or monitoring techniques change. Although information will be reported for Fiscal Years 1988 and 1989, the first year monitoring that will be fully reported will be Fiscal Year 1990. Fiscal Year 1990 will be the test to identify how well the Forestwide Monitoring Action Plan is working.

### ANALYZING AND EVALUATING MONITORING RESULTS

Monitoring is not complete until the data is analyzed and evaluated. Data and information obtained from monitoring will be analyzed with an objective, systematic technique. The analytical results will be used to subjectively evaluate the activity, practice or effect. The analytical methods, evaluation criteria and responsible persons are listed for each monitoring item.

While each individual resource area will analyze and evaluate the results for the items they are responsible for, the final evaluation for all monitoring items will be conducted by the Forest Interdisciplinary Team (ID Team). The ID Team will recommend actions to the Forest Management Team. The Forest Management Team will review the document and make decisions on the recommended actions.

An evaluation report based on monitoring results will be prepared and submitted to the Regional Forester and will be available to the public at the end of years 1993 and 1998. During the interim, an evaluation report will be prepared and submitted only if there should be a need for Forest Plan revision. However, the results of the monitoring and actions taken will be summarized annually for selected activities, practices and effects based on issues and potential resource conflicts. This annual summary will be available to the public.

### APPLYING MONITORING RESULTS

Actions that could be recommended and taken as the result of monitoring could be:

- No action. The results of monitoring shows that the Forest Plan is being implemented as planned or there is an insignificant difference.

- Referring the problem to the appropriate line officer for improvement of the application of management practices.

- Modifying the management practice as a Plan amendment

- Revising the cost per unit output;

- Initiating revision of the Forest Plan.

In order for monitoring to be the most effective, monitoring results should lead to a dynamic process of changing the way activities and practices occur on

the ground. If monitoring shows that an activity is not being implemented as planned, the appropriate action should be taken to remedy the action.

Monitoring will alert the Forest to the need for Forest Plan amendment or revision. If monitoring results show that outputs and effects are significantly different from what was projected in the Forest Plan, the Forest Interdisciplinary Team and/or the Forest Supervisor may recommend a revision of the Forest Plan. The revision is not effective until the Forest Planning process is completed.

While monitoring is an ongoing process of dynamic change, a formal review of the Payette Forest Plan is required by NFMA at least every 5 years. Forest Plan revision is required every 10 to 15 years.

## RELATIONSHIP TO OTHER MONITORING PLANS

### Soil, Water, Air and Fisheries Annual Monitoring Plan

The Soil, Water, Air and Fisheries Annual Monitoring Plan and Results is required by the Idaho Department of Health and Welfare Division of Environmental Quality. This plan is tiered to the Forestwide Monitoring Action Plan and includes more detail such as biological parameters and cost.

The results of this monitoring plan will be published annually in a separate document and also summarized in the Forestwide Monitoring Results.

### Project Specific Monitoring Plans

Some of the monitoring information will be collected forestwide while other information will be collected on a sample of projects. The Forestwide Monitoring Action Plan will be used as a guide in designing project level monitoring plans.

Full Interdisciplinary Team monitoring will not be included in the project specific monitoring plan but rather will be chosen and scheduled prior to the field season. Forest Planning Staff will be responsible for scheduling this monitoring.

When a Preliminary Project Proposal (PPP) is routed to Resource Specialists for identification of potential issues to address on a project, the specialist will propose monitoring for the project based upon the issues. After review by all specialists, the PPP will be routed to the Planning, Programming and Information (PPI) Staff. The PPI Staff will review the PPP and recommend monitoring items for the project. The PPI Staff will also keep a list of projects and implementation date for each monitoring item. If during the analysis phase of the NEPA Process an issue is brought up that was not previously identified, there will be the flexibility to include this into the monitoring plan. This will help assure that the required number of projects are monitored for each monitoring item. If not enough projects were chosen, the appropriate Staff will be notified and additional projects will be identified for monitoring for that year.

Project specific monitoring will be included in the NEPA document (i.e. Environmental Assessment (EA) or Environmental Impact Statement (EIS)). The decision to accomplish the monitoring will be included in the decision document (Decision Notice and Record of Decision). Including a project specific monitoring action plan in the NEPA document and making monitoring part of the decision will illustrate the commitment to monitoring and assure that it will be funded and accomplished. The Deciding Officer who signs the NEPA Decision Document is responsible for ensuring that project monitoring is carried out.

In a few rare cases, additional monitoring may be necessary on a project to address specific issues and concerns. The project specific monitoring plan should identify which items are tiered under the Forestwide Plan and which are project specific items.

#### **MONITORING AND THE BUDGET**

The monitoring outlined in the following action plan is the optimal monitoring for each program area on a reoccurring basis and is based on the presumption of full funding of the Forest Plan. It is doubtful if annual budgets will fully fund the monitoring described. Most funding for project monitoring is included under resource support for that particular project. **Projects will not be implemented unless they can be properly monitored.**

Annual monitoring plans will be prioritized based on annual budgets and program direction. The Forest Management Team will review and incorporate monitoring as part of the annual priority setting process and annual program development. Prioritization of monitoring should be based upon:

Required by Laws and Regulations

Memorandum of Understandings with other agencies

Required for reports to the Regional and/or Washington Office

Necessary to address issues and concerns raised during the Forest Plan and/or Project Implementation planning process.

## **CULTURAL RESOURCES**

Program Cultural Resources

Activity, Practice, or Effect Compliance with the National Historic Preservation Act (Section 106)

Activity Code AC11 MAR Number NA

Unit of Measure Number of Projects

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official Recreation Staff

**Description:** Forest projects will be monitored to determine which ones have received cultural resources support work. All ground disturbing projects (e.g. timber harvest, road building, range fences, wildlife burns, mining actions, campground construction) and structural modifying projects (e.g. interior or exterior changes to structures, painting) will be identified. Cultural resource inventories and reports should occur on at least 90% of all projects to be undertaken on the Forest.

Monitoring of the amount of Forest projects that receive Cultural Resource Management is necessary to protect cultural resources and cultural resource values from adverse impacts and to comply with the National Historic Preservation Act of 1966 (36 CFR 800). The primary use of the information will be to develop inventory priorities, to determine levels of compliance with Laws and Regulations, Secretary of Interior's guidelines and Forest Plan Standards and Guidelines. The secondary use of the information will be to evaluate the adequacy of the Forest Plan's direction, guidelines, workforce and budget.

There will be a reevaluation of the Forest's compliance with the National Historic Preservation Act of 1966 if greater than 10 percent of Forest projects do not receive Cultural Resource Management.

**Methods:** The Forest Archeologist will be informed of projects (project name, location, type of active, starting date, etc.) through Preliminary Project Proposals (PPPs), field observations, and other miscellaneous means. The District Rangers and Forest Staff Units will be responsible to inform the Archeologist of any project. The information must be to the Archaeologist in a timely manner (2-5 years ahead of a project) so that the proper pre-work can be done. There may be an occasional situations where a shorter time frame may be acceptable.

The Forest Archaeology will be responsible for the field resource inventory of at least 90 percent of applicable projects. The first priority for Cultural Resource Management is for projects in areas of moderate to high probability of having cultural resource properties. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Archaeologist and distributed by the Fire and Recreation Branch Chief.

Data necessary:

- compile a list of all forest projects
- develop an information form for each project with the following information:
  - date project information was received
  - project name
  - location
  - type of active
  - activity starting date
  - probability of cultural resource property occurrence
  - cultural resource inventory starting and ending dates
  - cultural resource findings report completion date
  - cultural resource findings brief
  - action required
  - project people/time
  - State Historic Preservation Office sign off date
  - future monitoring planned for the project area
  - date the report and action required was sent to the District

Program Cultural Resources

Activity, Practice, or Effect Protection of significant cultural resource properties

Activity Code AC12 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official Recreation Staff

**Description:** All identified cultural resource properties (National Register Sites, Administrative Sites, Cultural Resource Interpretative sites, other identified properties of cultural concern) will be monitored on a schedule that is compatible with their significance, vulnerability and/or susceptibility, and the site's management plans.

Cultural properties are monitored to protect cultural resources and cultural resource values from adverse impacts and to comply with the National Historic Preservation Act of 1966. The primary use of the information will be used to determine levels of compliance with Laws, Regulations, Secretary of Interior's guidelines and the Forest Plan Standards and Guidelines. The secondary use of the information will be to evaluate the adequacy of the Forest Plan's direction and Standards and Guidelines. It will also be used to assess the Forest's cultural resource workforce and budget.

There will be further evaluation and/or change in management direction if more than 5 percent of Class I or Class II properties monitored in a year are changed due to natural processes or if 3 percent of Class I or Class II properties are damaged by vandalism.

**Methods:** The Forest Archaeologist will develop an annual monitoring schedule (based on the above information) and will gather the necessary information through field observations and other miscellaneous means. The District Rangers and Forest Staff Units will be responsible to inform the Forest Archaeologist of any management activity that may effect a known cultural resource property and of any observed changes to other cultural resource properties whenever they may be identified.

The Forest Archaeologist will be responsible for the detailed site reviews and will complete the Cultural Resource Site Monitoring Form on page XXX for ever site monitored. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Archaeologist and distributed by the Fire and Recreation Branch Chief.

The following is a list of the Forest cultural resource properties to be monitored.

#### National Register Properties

10-IH-1566 - Hays Station and Chinese Terraced Gardens Interpretive Site  
10-IH-1778 - The Chinese Trail  
10-IH-1779 - Chi Sandra Gardens  
10-IH-1876 - Ah Toy's Terraced Garden  
10-VY-143 - PY 113 Cabin Creek Historic District located within the Frank Church - River of No Return Wilderness  
10-VY-311 - PY 475 McCall Administrative Site Historic District

Additional National Register Properties will be listed as they occur in the future.

#### Administrative Compounds and Buildings

PY-16 - Cold Meadows Guard Station Complex  
PY-326 - Bear Guard Station Complex  
PY-394 - Hornet Ranger Station Complex  
PY-397 - Lake Fork Guard Station Complex  
PY-467 - Chamberlain Ranger Station Complex  
PY-475 - McCall Administrative Site (also listed as National Register Historic District)  
PY-478 - Mann Creek Guard Station Complex  
PY-540 - Council Ranger Station Complex  
PY-585 - Krassel (The Old Ranger Station)  
PY-626 - South Fork Guard Station Complex  
PY-650 - Brownlee Ranger Station (only the old buildings)  
PY-797 - Big Creek Ranger Station Complex  
PY-798 - Burgdorf Guard Station Complex  
PY-799 - Hard Creek Ranger Station Complex  
PY-800 - Paddy Flat Ranger Station Complex  
PY-801 - Price Valley Ranger Station Complex  
PY-802 - Warren Ranger Station Complex

The Warren Mining District is an area that receives seasonal public visitation, exploratory mining activity and has a high probability for vandalism. The following sites are to be monitored annually:

PY-920 - Chinese Store  
PY-874 - Chinese Cemetery  
PY-927 - Chinese Cabin  
PY-542 - Broken Bown  
PY-795 - Warren School House  
PY-873 - Warren Dredge  
PY-554 - Mini Dredge  
PY-555 - Incredible Dredge Hulk (Noah's Ark)  
PY-924 - Pretty Woman Cabin  
PY-925 - Black Hornet  
PY-926 - Hog Jaw  
PY-802 - Warren Townsite



Ongoing Projects with Cultural Resource Concerns - This list will be updated annually.

South Fork of the Salmon River Right of Way - 29 cultural properties located upon the Payette National Forest. Also an additional 10 sites located on the Boise National Forest will be the responsibility of the Payettes to monitor.

Timber Sales containing cultural resource propoerties that need to be monitored are listed as follows:

- Sturgill - Benton Timber Sale - 4 cultural properties
- Green Ranch "A" Timber Sale - 4 cultural properties
- Happy Jack Timber Sale - 2 cultural properties
- Rocky Top Timber Sale - 2 cultural properties
- Sater-Granite Timber Sale - 4 cultural properties
- Hershey-Scribner Timber Sale - 6 cultural properties
- Grizzly Timber Sale - 1 cultural property

## RECREATION

Program Recreation

Activity, Practice or Effect Recreation and Wilderness Use

Activity Code AN12/AW12 MAR Number NA

Unit of Measure Forest Rec. Use (RVDs)

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system RIM Use Form

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual and as needed

Reporting Period Three years

Responsible Official(s) Recreation Staff

**Description:** The number of recreation and wilderness users by Recreation Visitor Days (RVDs) and the types of use (hiking, hunting, camping, pleasure driving, etc.) will be monitored annually on the Forest. The recreation use data will be by districts at a minimum. Smaller logical units will be used if more accurate recreation use information is necessary for site specific project level planning. The number or size of a monitoring area will be agreed upon by the District and the Forest Recreation and Wilderness Staffs.

The primary use of the recreation and wilderness use information is for comparisons between use, user capacities, site and facility construction programs, and facility conditions and maintenance. The secondary use of the use information is so that recreation and wilderness planning decisions can be made to meet future demands. The use information is also necessary to evaluate the adequacy of the Forest Plan's recreation and wilderness management direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if recreation or wilderness use varies more than 20 percent on average from projected use figures.

**Methods:** District and Forest Recreation and Wilderness Staffs are responsible to fill out the recreation and wilderness use report forms. The District is responsible for the field data and the Forest Staff is responsible for the final report. The use report forms are based on road and trail counts (recreation vehicles that pass an entrance point plus people that enter the byway of a trail give a total of visits and RVDs). The use counts are best from traffic counters (existing loops), but estimates, observations, and quests will have to do where counters are not available. The number of people per recreation vehicles, period of visit, type of use and period of each use will be recorded from ongoing field observations that are done by the District's Recreation Staff.

The final recreation and wilderness use information is compiled at the end of the Fiscal Year. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

Data Collected:

- traffic counter figures (recreation vehicles only)
- average number of people per recreation vehicle
- average length of stay per recreation vehicle
- types of recreation and wilderness uses
- percentage of use for each type of use
- average number of campground units occupied per day
- average number of people per campground unit
- average length of stay at a campground unit

Program Recreation

---

Activity, Practice or Effect Recreation and Wilderness Facility Condition

---

Activity Code AN12/AW12 MAR Number NA

---

Unit of Measure NA

---

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

---

Is this item published in the Plan, Chapter V Yes

---

Frequency Item is Monitored Annual

---

Reporting Period Two consecutive years

---

Responsible Official(s) Recreation Staff

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**Description:** The condition and maintenance of developed recreation sites (campgrounds, trailheads, etc.) and constructed recreation facilities (toilets, hitch racks, display kiosks, etc.) will be monitored on the Forest annually. These sites will be monitored in relation to a site's Operation & Maintenance Plan and to the physical condition of a site.

The primary use of the recreation and wilderness facility condition and maintenance information is so that comparisons can be made between use, user capacities, facility conditions and maintenance and management. The secondary use of the facility condition and maintenance information is so that facility planning and decisions can be made to meet future demands. The information is also necessary to evaluate the adequacy of the Forest Plan's recreation and wilderness facility management direction, guidelines, workforce and budget and the adequacy of Operation & Maintenance Plan(s).

If the monitoring shows significant site(s) deterioration in three consecutive years a formal detailed review of the Forest Plan and the site(s) Operation and Maintenance Plan is necessary.

**Methods:** District Recreation Staff are responsible for developing the Operation and Maintenance Plan for a site and for the gathering of field data required on the facility condition forms; R4 2300-4 (Recreation Site Maintenance and Safety checklists) and FS 2300-6 (RIM facility condition reports). The final recreation and wilderness facility condition and maintenance information is compiled annually at the end of the Fiscal Year. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the District's and the Forest Recreation Staff and distributed by the Fire and Recreation Branch Chief.

Date Collected:

- road conditions
- site conditions
- conditions of tables, fire rings, etc.
- condition of display structures
- condition of signs
- erosion problems
- condition of toilets
- condition of water system
- condition of vegetation
- condition of fences

Program Recreation

Activity, Practice or Effect Recreation Special Uses - Private Sector Management

Activity Code AN122 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Two consecutive years

Responsible Official(s) Recreation Staff

**Description:** Recreation special uses of private sector management of recreation facilities will be monitored annually on the Forest. These special uses range from Brundage Mountain Ski Area to outfitters and guides operations.

There will be further evaluation and/or change in management direction if there is inability to make proper evaluations of the management of the facility and/or there are serious resource or public safety problems because of lack of funding.

**Methods:** Monitoring will consist of office review of operating plans and field inspections of the site. This monitoring will be done by the Forest Recreation Specialist who will prepare the annual report.

Program Recreation

Activity, Practice or Effect Trail Management and Maintenance

Activity Code AT12 MAR Number NA

Unit of Measure Quality of Trails

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Recreation Staff

**Description:** Management and conditions of Forest trails will be monitored annually and compared to District's Operation & Maintenance Plan and the physical conditions of the trails.

The primary use of the trail condition and maintenance information is to compare use, user capacities, and trail management and maintenance. The secondary use of the information is to facilitate in trail planning and decisions to meet future trail use demands. The trail information is also necessary to evaluate the adequacy of the Forest Plan's trail management direction, guidelines, workforce and budget and the adequacy of District's Operation and Maintenance Plan.

If monitoring shows significant deterioration in three consecutive years a formal detailed review of the Forest Plan and the District's Trail Operation and Maintenance Plan is necessary.

**Methods:** District Recreation Staff are responsible for the Trail Operation and Maintenance Plan and for gathering the field data on the trail condition. The inventory will be completed and reported on a case by case basis. Inventory will be documented on the Trail Inventory form on pages X to X.

The final report on the condition and maintenance of trails is compiled at the end of the Fiscal Year by the Forest Recreation and Wilderness Staff. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Districts and the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

Date Collected:

- miles of trail
- width
- types of use
- tread conditions
- amount of down fall
- condition of signs
- condition of bridges
- erosion problems
- importance of a trail



Program Recreation

Activity, Practice or Effect Trail Reconstruction and Construction

Activity Code AT2/AT22 MAR Number NA

Unit of Measure Miles of trail reconstruction and construction

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Recreation Staff

**Description:** Trail construction and reconstruction projects accomplishments will be monitored by Fiscal Year to determine if trail construction activities designated in the Forest Plan are occurring as planned.

Additionally the information will be used to facilitate with trail planning and decisions can be made to meet future trail demands. The trail construction information is also necessary to evaluate the adequacy of the Forest Plan's trail development program direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if failure to initiate projects reduces the users experience level and distracts from the total recreation program. Additionally, there will be a need for further evaluation if there is significant differences from Forest Plan funding from actual funding in trail construction.

**Methods:** The Forest Recreation Staff is responsible for the trail construction program monitoring. The final trail construction program information is compiled at the end of the Fiscal Year and the report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation Staff and distributed by the Fire and Recreation Branch Chief.

Program Recreation

Activity, Practice, or Effect Recreation Facility and Site Capacity

Activity Code AN12 MAR Number NA

Unit of Measure PAOT Days and RVDs

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annually

Reporting Period 3 years

Responsible Official Recreation Staff

**Description:** The relationship between the recreation facility and/or site theoretical capacity (People At One Time Days (PAOT-Days)) and the actual recreation use (Recreation Visitor Days (RVDs)) that the site receives will be monitored annually for the Forest's Developed Recreation facilities and sites.

The primary use of this information is to make a comparison between recreation facility and site theoretical capacity and actual use and the recreation facility and site construction development program. The secondary use of the recreation facility and site comparison is to facilitate recreation site planning and decisions to meet future recreation and wilderness user demands. The monitoring information is also necessary to evaluate the adequacy of the Forest Plan's recreation facility and site development program direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if monitoring shows actual use exceeds 60 percent or is less than 15 percent of a site's theoretical capacity for 3 consecutive years.

**Methods:** The Forest Recreation and Wilderness Staff is responsible for the recreation facility and site theoretical capacity and actual use comparisons. Actual use data will be collected or estimated by the District Recreation Staff annually. The information will be compiled at the end of the Fiscal Year and the report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

**Data Collected:**

- sites/facilities open for use
- capacity of each open site/facility
- season of use for each site/facility

Program Recreation

Activity, Practice or Effect Recreation Facilities Construction

Activity Code AN2/AN22 MAR Number NA

Unit of Measure Number of Facilities

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 2 years

Responsible Official(s) Recreation Staff

**Description:** Recreation facility and site construction will be monitored and compared to the Forest Plan planned activities.

The primary use of this information is to facilitate recreation facility and site planning to meet future recreation and wilderness demands. The recreation facility and site construction information is also necessary to evaluate the adequacy of the Forest Plan's recreation site/facility development program direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if failure to initiate projects results in a reduced user experience level and distracts from the total recreation program for three consecutive years.

**Methods:** The Forest Recreation and Wilderness Staff is responsible for monitoring the recreation facility construction program. The final recreation facility construction program information is compiled at the end of the Fiscal Year. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

Program Recreation

Activity, Practice or Effect Visual Quality Objectives (VQOs) Protection and Compliance

Activity Code AV12 MAR Number NA

Unit of Measure VQO

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Recreation Staff

**Description:** Visual Quality Objectives (VQOs) are categories of acceptable landscape alteration measured in degrees of deviation from the natural appearing landscape.

Protection of the Visual Quality Objectives (VQOs) identified in the Forest Plan will be monitored on 75 percent of all ground disturbing projects (e.g. timber harvest, road building, range fences, wildlife burns, mining actions, campground construction, new structures). Compliance with VQOs will be monitored on three projects per year, one significant project and two other projects. These projects will be identified prior to the field season.

This information will be used to assure protection of VQO settings and their associate recreation opportunities and values from adverse impacts caused by landscape modifications. The primary use of this information will be used to develop inventory priorities, to determine levels of compliance with Laws and Regulations and implementation of the Forest Plan. The secondary use of the information will be to evaluate the adequacy of the Forest Plan's direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if there is an inability to review 75 percent of projects and noncompliance of one project in two continuous years or three projects in four continuous years.

**Methods:** The Forest Recreation and Wilderness Staff will gather the necessary information (project name, location, type of active, starting date, etc.) through Preliminary Project Proposals (PPPs), field observations, and other miscellaneous means. The District and Staff Units will be responsible to inform the Forest Recreation and Wilderness Staff of ongoing projects. The information must be to Forest Recreation and Wilderness Staff in a timely manner (2 to 5 years ahead of a project) so that the proper pre-work can be done. There may be an occasional situations where a shorter time frame may be acceptable.

The Forest Recreation and Wilderness Staff will be responsible for the field resource inventory. Seventy-five percent of applicable projects will be inventoried with the top priority of inventory being areas of moderate to

high. The data will be compared to VQO maps located in the Forest Recreation and Wilderness Staff office. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

Program Recreation

Activity, Practice, or Effect Recreation Opportunity Spectrum (ROS) Protection and Compliance

Activity Code AN12 MAR Number NA

Unit of Measure Recreation Opportunity Spectrum (ROS) setting

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored New projects continuous, 3 completed projects per year, 1 significant and 2 others

Reporting Period 2 consecutive years

Responsible Official Recreation Staff

**Description:** The Recreation Opportunity Spectrum (ROS) is a method for measuring the ability of the Forest land to meet the various types of demands imposed by a variety of recreation uses.

Protection of the Recreation Opportunity Spectrum (ROS) setting will be monitored on 75 percent of all ground disturbing projects (e.g. timber harvest, road building, range fences, wildlife burns, mining actions, campground construction, new structures). Compliance with the ROS setting will be monitored on three projects per year, one significant project and two other projects. These projects will be identified prior to the field season.

This monitoring information will be used to protect ROS settings and their associate recreation opportunities and values from adverse impacts caused by landscape modifications. The primary use of the information will be used to develop inventory priorities, to determine levels of compliance with Laws and Regulations and implementation of the Forest Plan. The secondary use of the information, will be to evaluate the adequacy of the Forest Plan's direction, guidelines, workforce and budget.

There will be further evaluation and/or change in management direction if there is an inability to review 75 percent of projects and/or noncompliance of one project in two continuous years or three projects in four continuous years.

**Methods:** The Forest Recreation and Wilderness Staff will gather the necessary information (project name, location, type of active, starting date, etc.) through Preliminary Project Proposals (PPPs). The District and Staff Unit's will be responsible to inform the Forest Recreation and Wilderness Staff of any ground disturbing project. The information must be to the Forest Recreation and Wilderness Staff in a timely manner (2 to 5 years ahead of a project) so that the proper pre-work can be done. There may be an occasional situations where a shorter time frame may be acceptable.

The Forest Recreation and Wilderness Staff will be responsible for field resource inventory. 75 percent of applicable projects will be monitored with

the top priority being moderate to high recreation use areas. The data collection will be done by Forest Recreation and Wilderness Staff. The data will be compared to ROS maps located in the Forest Recreation and Wilderness Staff office. The report to the Forest Supervisor and other Units will be in a narrative form prepared by the Forest Recreation and Wilderness Staff and distributed by the Fire and Recreation Branch Chief.

**TIMBER**



Program Timber  
 Activity, Practice or Effect Timber Harvested by Non-Interchangeable Component  
 Activity Code ET114 MAR Number \_\_\_\_\_  
 Unit of Measure Volume (MBF) & Acres  
 Is this item also tracked in another automated system? Yes If yes,  
 what is the name of the system STARS  
 Is this item published in the Plan, Chapter V Yes (Level I \*)  
 Frequency Item is Monitored Annual  
 Reporting Period 3 years  
 Responsible Official(s) Timber Staff and District Rangers

\* Level I contains basic monitoring requirements regardless of funding and staff limitations.

**Description:** Volume and acres sold by Non-interchangeable Component (NIC) will be monitored to determine if the Forest Plan planned outputs are consistent with what is occurring on the ground. This information will be considered during updating the 7-year Timber Sale Action Plan and the revision of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of greater than 25 percent of the Forest Plan volume and acres by NIC forestwide.

<u>Non-interchangeable Components</u>	<u>Volume (MBF)</u>
NIC 1 - Base Program Conventional Logging Method	72,300
NIC 2 - Base Program Helicopter Logging	3,000
NIC 3 - Whitewoods	3,900
NIC 4 - South Fork Salmon River	1,700
TOTAL	80,900

**Methods:** The volume and acres harvested by NIC will come from three sources. The Sale Preparation Spreadsheet is prepared by the District for every timber sale. This information will then be passed on to the Forest Timber Staff. The 5-year Timber Sale Action Plan is coordinated by the Districts and the Forest Timber Staff. The Periodic Sale Statement are prepared by the Forest Timber Staff. This information will be compiled together annually and will be reported every three years by the Timber Staff. STARS currently does not have volume and acres reported by NIC but it will be added soon.

Program Timber

Activity, Practice or Effect Reforestation Natural and Artificial

Activity Code ET24 MAR Number \_\_\_\_\_

Unit of Measure Acres

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level I \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level I contains basic monitoring requirements regardless of funding and staff limitations.

**Description:** The number of acres naturally and artificially regenerated will be monitored in order to determine if Forest Plan projected activities are occurring on the ground. Reforestation is essential to providing future timber stands. This information will be used in planning the next fiscal years' program and during revision of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of greater than 10 percent of the number of acres naturally and artificially regenerated per year from the amount that was indicated in the Forest Plan.

The Forest Plan indicates that 4,081 acres will be artificially regeneration and 825 acres will be naturally regeneration per year.

**Methods:** The number of acres regenerated per year will be monitored with the bi-annual accomplishment reports and TMIS prepared by the Districts. This information will be reported annually to the Forest Timber Staff who will compile the information for a 5 year evaluation.

Program Timber

Activity, Practice or Effect Precommercial Thinning

Activity Code ET24 MAR Number 20.1 and 20.2

Unit of Measure Acres Precommercially Thinned

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Silviculture Accomplishment Report (TMIS)

Is this item published in the Plan, Chapter V Yes (Level I \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level I contains basic monitoring requirements regardless of funding and staff limitations.

**Description:** The number of acres precommercially thinned will be monitored in order to determine if Forest Plan planned outputs are consistent with on the ground actions. The purpose is to insure future timber yields and expected effects on other resource values. This information will be considered during the next fiscal years activity plans and during the revision of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of greater than ten percent of Forest Plan projected acres precommercially thinned. The Forest Plan schedules 2,326 acres to be precommercially thinned annually.

**Methods:** The number of acres precommercially thinned will be monitored with the bi-annual accomplishment reports and TMIS prepared by the Districts. This information will be reported to the Forest Timber Staff annually who will compile the information for a 5 year evaluation.

Program Timber

Activity, Practice or Effect Review of Silvicultural Prescriptions to Evaluate the Adequacy of Prescriptions for all Resources

Activity Code ET114 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Primary Staff

**Description:** Silvicultural prescriptions will be reviewed to evaluation the adequacy of the prescription for all resources. This monitoring will assure that Standards and Guidelines and site specific resource concerns are taken into account in the silvicultural prescriptions for a timber sale.

There will be further evaluation and/or change in management direction if there is significant changes of silvicultural prescriptions from Standards and Guidelines for all resources.

**Methods:** Monitoring will consist of a full Interdisciplinary Team (IDT) review and evaluation of at least two timber sales annually. Each discipline is responsible for preparing a response to the review. These responses will be reviewed and compiled annually by the Forest Timber Staff.

Program Timber

Activity, Practice or Effect Volume and Acres Sold by Level I

Activity Code ET114 MAR Number NA

Unit of Measure Volume (MBF) and Acres

Is this item also tracked in another automated system? Yes If yes,  
 what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Volume and acres sold by Level I will be monitored to determine if the Forest Plan planned outputs are consistent with what is occurring during implementation. Timber volumes in the Forest Plan were derived from FORPLAN outputs by Level I's. This timber harvest information will be considered during the updating and the revision of the Forest Plan. The information will be used to check FORPLAN timber and resource outputs.

<u>LEVEL I</u>	<u>Volume*</u>	<u>Acres</u>
Nonanadromous	56,143	
Boulder	3,027	
Elk Creek	1,875	
Little Salmon	10,168	
French	2,500	
Warren	5,447	

\*Forest Plan scheduled timber harvest volume for first decade

There will be a further evaluation and/or change in management direction if there is a deviation of greater than 10 percent of actual volume and acres harvested by Level I from planned volume and acres harvested.

**Methods:** Information for comparing Forest Plan projections on volume and acres harvested by Level I will be obtained from three sources. The Sale Preparation spreadsheet is prepared by the District for every sale and this information will be passed on the Forest Timber Staff. The 5-year Timber Sales Action Plan is prepared with coordination from the Districts and Forest Timber Staff. A Periodic Sale Statement is prepared by the Forest Timber Staff. The District Rangers are responsible for supplying the District annual harvest information by Management Area to the Timber Staff who will compile the information into a report after three years.

Program Timber

Activity, Practice or Effect Volume and Acres Sold by Working Group

Activity Code ET114 MAR Number N/A

Unit of Measure Volume (MBF) and Acres

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Volume and acres sold by working group will be monitored to determine if the Forest Plan planned outputs are consistent with what is occurring on the ground. This information will be considered during revision of the 7-year Timber Sale Action Plan and the Forest Plan.

There will be a further evaluation and/or change management direction of the amount of timber harvested by working group if there is a deviation greater than 25 percent of planned volumes and acres by working group forestwide.

<u>Working Group</u>	<u>Volume</u>	<u>Acres</u>
Mixed Conifer High	28,000	2,892
Mixed Conifer Moderate	37,000	3,830
Mixed Conifer Low	2,700	350
Spruce	2,100	290
Lodgepole Pine/Alpine Fir	11,100	755
TOTAL	80,900	8,117

**Methods:** Information for comparing Forest Plan projections on volumes and acres by working groups will be obtained from Sale Preparation Spreadsheet, 5-year Timber Sales Action Plan and Periodic Sale Statement. The Sale Preparation Spreadsheet is prepared by the District for every timber sale. This information will then be passed on to the Forest Timber Staff. The 5-year Timber Sale Action Plan is coordinated by the Districts and the Forest Timber Staff. The Periodic Sale Statement are prepared by the Forest Timber Staff. This information will be compiled together annually and will be reported every three years by the Timber Staff.

Program Timber

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Activity, Practice or Effect Volume and Acres Sold by Logging System

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Activity Code ET114 MAR Number \_\_\_\_\_

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Unit of Measure Volume (MBF) and Acres

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Is this item also tracked in another automated system? Yes If yes,  
 what is the name of the system STARS

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Is this item published in the Plan, Chapter V Yes (Level II \*)

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Frequency Item is Monitored Annual

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Reporting Period 3 years

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Responsible Official(s) Timber Staff and District Rangers

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\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Volume and acres sold by logging system will be used in determining if the Forest Plan planned outputs are consistent with what is occurring on the ground. This information will be considered during the updating and the revision of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of greater than 25 percent of actual volume and acres by logging system forestwide from planned outputs.

<u>Logging System</u>	<u>Volume(MBF)</u>	<u>Acres</u>
Tractor	60,400	6,088
Skyline	16,000	1,579
Helicopter	4,500	450
TOTAL	80,900	8,117

**Methods:** Information for comparing Forest Plan projections on logging systems with actual logging systems used will be obtained from three sources. The Sale Preparation Spreadsheet is prepared by the District for every sale and this information will be passed on to the Forest Timber Staff. The 5-year Timber Sales Action Plan is prepared with a coordinated effort between the Districts and Forest Timber Staff. The Periodic Sale Statement is prepared by the Forest Timber Staff. This information will be compiled annually and reported every three years.

Program Timber

Activity, Practice or Effect Volume and Acres Sold by Cutting Method

Activity Code ET114 MAR Number NA

Unit of Measure Volume (MBF) and Acres

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The report of the volume and acres sold by cutting method will be used in determining if Forest Plan planned outputs are consistent with what is occurring on the ground. This information will be considered during the updating and the revision of the Forest Plan. Following is Forest Plan projected volume and acres by cutting method.

<u>Cutting Method</u>	<u>Volume (MBF)</u>	<u>Acres</u>
Clearcut	61,600	5,411
Shelterwood		
Seed Cut	10,500	1,173
Removal Cut	0	0
Commercial Thin	6,700	1,248
Selection	2,100	285
Salvage/Sanitation	0	0
TOTAL	80,900	8,117

There will be a further evaluation and/or change in management direction if the actual volume and acres sold by cutting method deviates greater than 25 percent of Forest Plan projections forestwide.

**Methods:** Information for comparing Forest Plan projections on cutting methods with actual cutting methods will be obtained from three sources. The Sale Preparation Spreadsheet is prepared for every sale by the Districts. This information will then be passed on to the Forest Timber Staff. The 5-year Timber Sales Action Plan is a coordinated effort between the Forest Timber Staff and the Districts. Periodic Sale Statements are prepared by the Forest Timber Staff. This information will be compiled together annual and will be reported every three years by the Forest Timber Staff. Analysis will be at a Forestwide level.



Program Timber

Activity, Practice or Effect Adequate Restocking of Lands within 5 years after Final Harvest

Activity Code ET124 MAR Number NA

Unit of Measure Acres Restocked

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system Silviculture Accomplishment Report

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The success of the restocking of lands within five years of final harvest will be monitored to assure that Forest Plan reforestation objectives are met. Additionally, the monitoring will be used to assure compliance with the National Forest Management Act (NFMA). Section 6 (g)(3)(E)(ii) of NFMA requires "that timber will be harvest from National Forest System lands only where...there is assurance that such lands can be adequately restocked with five years after harvest". Monitoring of this item is required by NFMA Regulations Section 219.12 (5)(iii).

The monitoring results will be considered during the updating of the Forest Plan to help determine what lands can be successfully reforested and to assist in assessing forested lands suited for timber production.

There will be futher evaluation and/or change in management direction if there is 10 percent or more in nonstocked areas or less than 90 percent accomplishment in properly restocking cutover areas.

**Methods:** The success of the plantations will be monitored with data from stocking survival exams and certification of plantations according to Regional Stocking Standards (FSH 2409-266 Exhibit 2 page 5.31-4) which will be accomplished by the Districts for all plantations. Survival exams and certification of plantations occur the first, third and fifth year after the plantation is established. The Districts will provide this stocking data to Timber Staff who will compile it into an annual report and assess the need for change.

Program Timber

Activity, Practice or Effect Rehabilitation of Strata 21 Lands

Activity Code ET124 MAR Number N/A

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,

What is the name of the system ? N/A

Is this item published in the Plan, Chapter V ? Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Strata 21 lands are areas that were partially cut in the past and are now in need of silvicultural treatments to returns these stands to an adequate productivity status. (This does not refer to reforestation backlog.) The acres of Strata 21 areas that are rehabilitated will be monitored every year to determine if the planned amount of rehabilitation of Strata 21 lands is occurring. Approximately 1,616 acres per year should be accomplished through a combination of regular timber sales and special programs.

This information will be considered in scheduling future rehabilitation efforts and during the updating and the revision of the Forest Plan. There will be further evaluation and/or change in management direction if forestwide 15 percent of the Strata 21 lands are not rehabilitated every 5 years.

**Methods:** The acres of Strata 21 lands that are rehabilitated each year will come from the Annual Strata 21 accomplishment report prepared by the Districts. This information will be passed on to the Forest Timber Staff who will annually compile the information and prepare the 5 year report.

Program Timber

Activity, Practice or Effect Reforestation Accomplishments by Working Group  
and Acres Certified

Activity Code ET24 MAR Number

Unit of Measure Acres

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The accomplishments of reforestation by working groups and the number of acres that are certified will be monitored in order to determine if Forest Plan planned outputs are consistent with actions on the ground. This information will be considered during the revision of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of 10 percent forestwide from the reforestation accomplishments projected in the Forest Plan.

The Forest Plan indicates that 4,081 acres per year will have artificial reforestation and 825 acres per year will have natural reforestation.

**Methods:** The accomplishments of reforestation by working groups and the number of acres that are certified will be monitored with information from bi-annual accomplishment reports and TMIS that are prepared by the Districts. This information will be reported annually by the Districts to the Forest Timber Staff who will compile the information for a 5 year report.

Program Timber

Activity, Practice or Effect Precommercial Thinning by Working Group  
According to Prescribed Guidelines

Activity Code ET24 MAR Number NA

Unit of Measure Acres Precommercial Thinned by Working Group

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system STARS

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Precommercial thinning accomplishments by working groups will be monitored to determine if accomplishments reflect the Forest Plan anticipated outputs. This monitoring item is a refinement of monitoring of acres precommercially thinned (page XX). By examining precommercial thinning by working group it will assure that thinning is being performed in the working groups that provide the best biological and economical response to the thinning. This information will be considered during the next fiscal years planning and during the updating of the Forest Plan.

There will be further evaluation and/or change in management direction if there is a deviation of greater than ten percent of the Forest Plan projected acres precommercially thinned. The Forest Plan schedules 2,326 acres to be precommercially thinned every year.

**Methods:** Precommercial thinning accomplishments by working group will be monitored with the Bi-annual accomplishment reports prepared by the Districts. Additionally, the District Silviculturalists will perform field and office checks of field prescriptions of representative stands to certify precommercial thinned acres. The Districts will report this information annually to the Forest Timber Staff who will compile a 5 year report.

Program Timber

Activity, Practice or Effect Maximum Size of Openings Created by Regeneration Cuts

Activity Code ET114 MAR Number NA

Unit of Measure Acres per Opening

Is this item also tracked in another automated system? No If yes,

what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The National Forest Management Act (NFMA) Regulations 36 CFR Section 219.27 (7)(d) requires that forest openings created by regeneration harvest do not exceed 40 acres unless there is approval by the Regional Forester. Monitoring of this item is required by NFMA Regulations Section 219.12 (5)(iii).

The Forest Plan identifies guidelines to follow in determining the need for a regeneration harvest methods that is greater than 40 acres. The amount of openings created by regeneration harvest in excess of 40 acres will be monitored to determine if the standards and guidelines in the Forest Plan are being followed.

There will be further evaluation and/or change in management direction if greater than 10 percent of created openings forestwide exceed 40 acres.

**Methods:** The number of harvest openings that exceed 40 acres will be taken from the sale preparation spreadsheet which is prepared by Districts. This information is reported to the Forest Timber Staff who will compile the information for the annual update and prepare the report every 5 years.

Program Timber

Activity, Practice, or Effect Yield Projections of Managed Stands

Activity Code ET112 MAR Number N/A

Unit of Measure Thousand Board Feet (MBF)

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored 5 years

Reporting Period 10 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Growth or yield in response to silvicultural prescriptions will be monitored to verify yield tables and management intensity used in development of the Forest Plan.

The purpose of this monitoring is to verify and compare measurements of managed stands to those predicted in managed yield tables of the Forest Plan. This information will be used to determine if projected future yield of timber from the Forest is obtainable.

There will be further evaluation and/or change in management direction if there is a deviation of greater than 15 percent from plan data.

**Methods:** Permanent growth plots will be used to verify projected yields from managed stands. Data will be collected for each working group. The growth plots data will be collected every 5 years with 1993 being the next scheduled collection year.

The Forest Timber Staff is responsible for compiling this information and comparing it to Forest Plan data. District Rangers are responsible for protecting the permanent growth plot installations.

Program Timber

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Activity, Practice or Effect Verify Classification of Suited Timber Acres

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Activity Code ET112 MAR Number NA

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Unit of Measure Acres

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes (Level II)\*

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Frequency Item is Monitored 5 years

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Reporting Period 10 years

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Responsible Official(s) Timber Staff

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\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** Verification of the classification of suited timber acres will be accomplished by reviewing timber stratification as related to productivity, working group, condition class and land slope. The National Forest Management Act (NFMA) Regulations 36 CFR Section 219.14 identifies criteria for evaluation of suited timber lands. Basically, these criteria are:

The land is forest land that is at least 10 percent occupied by forest trees,

Technology is available to ensure timber production from the land without irreversible resource damage to soils production, or watershed conditions,

The land can be adequately restocked and,

The land is not withdrawn from production by an Act of Congress, the Secretary of Agriculture or the Chief of the Forest Service.

Monitoring of this item is required by NFMA Regulations Section 219.12(5)(iii).

This verification will assist in determining if the suited timber acres identified in the Forest Plan are accurate and will be used during the revision of the Forest Plan, in conjunction with other monitored items, to determine suited timber lands.

There will be further evaluation and/or change in management direction if there is a deviation from identified suited acres of greater than 15 percent of suited timber acres forestwide. There are 431,721 acres identified as suited timber lands in the Forest Plan.

**Methods:** Stand exams and the Forest inventory productivity survey will provide data to verify the classification of suited timber acres. Stand exams are accomplished prior to each timber sale in the sale area and inventory timber stratification as related to productivity, working group, condition class and land slope. The results of this inventory as related to verification of suited timber acres on a project level will be reported to the Forest Timber Staff by the District.

An inventory productivity survey for the Forest has been completed and is currently being used to verify Forest Plan stratification. The Forest Timber Staff will compare the productivity survey to Forest Plan data. The information from the two sources will be compiled by the Timber Staff who will prepare a report every five years. The information will then be compiled at the end of ten years to be assessed during Forest Plan revision.



Program Timber

Activity, Practice or Effect Fuelwood Supply and Demand

Activity Code ET124 MAR Number NA

Unit of Measure Cords

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff and District Rangers

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The consumption and supply of fuelwood will be monitored forestwide. This information will be used by the Management Team to determine if the supply and demand are balanced based on availability of access.

**Methods:** The consumption of fuelwood will be monitored by using the Annual Free Use Report and the Cut and Sold Report prepared by Forest Timber Staff. Public input on the supply of firewood will be collected by the Forest Public Affairs Specialist and the Firewood Coordinator on the Weiser Ranger District. This information will be measured annually. The District Rangers and Forest Timber Staff are responsible for reporting this information every three years. At that time the Management Team will review the information to determine if supply and demand are balanced based on the availability of access.

Program Timber

Activity, Practice or Effect Changes in Insects and Disease Populations

Activity Code Q180 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff

**Description:** Changes in insect and disease population will be monitored in order to assess the need for salvage harvest. There will be further evaluation and/or change in management direction if there is a 10% increase in mortality in any of the Coordinated Allocation Zones (CAZs) selected for timber management or a 25% increase in other CAZs. The percent increase is based on conditions existing during the first year of the Forest Plan.

**Methods:** There will be an annual evaluation by Forest Pest Management group in Boise. Additionally, the Forest Timber Staff will use stand exams and plantation survival, post treatment of treated areas and post timber sale review the evaluate the populations of insects and diseases. Increases in insect and disease populations will be reviewed by the Forest Timber Staff, Forest Pest Management Group and the Management Team in order to assess the need for change. The Forest Timber Staff is responsible for reporting this information every three years.

Program Timber

Activity, Practice or Effect Catastrophic Losses in Suited Timber Lands

Activity Code Q180 MAR Number NA

Unit of Measure Acres and Volume (MBF)

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber Staff

\* Level I monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The volume and acres of timber lost to catastrophics occurrences in suited timber acres will be monitored annually to determine the need for a salvage effort effort and/or an adjustment to the Allowable Sale Quantity (ASQ).

There will be further evaluation and/or change in maangement direction if there is a loss of volume on greater than 5 percent of suited timber acres forestwide.

**Methods:** There will be an annual evaluation by the Forest Pest Management Group and Forest Fire and Timber Staff. The Forest Timber Staff will compile a report ever 3 years.

Program Timber

Activity, Practice or Effect Catastrophic Losses Outside Suited Timber Acres

Activity Code Q180 MAR Number NA

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes (Level II \*)

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Timber Staff

\* Level II monitoring is needed to evaluate the detail of the timber resource in the Forest Plan and to collect better data for revision of the Forest Plan. This monitoring will be done if funding and personnel are available.

**Description:** The volume and acres of timber catastrophic losses outside suited timber acres will be monitored to determine if these areas should be salvage harvested. Salvage harvesting on lands determined as not suited is allowed under the National Forest Management Act (NFMA) Regulations 36 CFR Section 219.27 (c)(1).

There will be further evaluation and/or change in management direction if there is a loss of trees on 10 percent or more of acres not appropriate for timber management.

**Methods:** There will be an annual evaluation by the Forest Pest Management Group and Forest Fire and Timber Staff. The Forest Timber Staff will compile a report every three years.

Program Timber

Activity, Practice or Effect Volume and Acres Salvage Harvested

Activity Code ET114 MAR Number 17.4

Unit of Measure Volume and Acres

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Timber Staff and District Rangers

**Description:** The volume and acres salvage harvested by working group will be monitored annually. These will be broken down by 1) that harvested from suited timber land and 2) that harvested from nonsuited timber land. The Forest Plan estimated approximately 2 MMBF (million board feet) would be harvested from suited timber lands annually. This volume would contribute to the Allowable Sale Quantity (ASQ). Additionally, 2 MMBF would be harvested from nonsuited timber lands annually.

This monitoring is done to account for salvage volume that is applied to the ASQ and not applied to the ASQ. This information will also be used to evaluate the effects of catastrophic losses on the ASQ for future years.

**Methods:** The Districts will annually report this information to the Forest Timber Planner. The Timber Planner will review, compile and report this information.

Program Timber

Activity, Practice or Effect Below Cost Timber Sales Volume

Activity Code ET114 MAR Number \_\_\_\_\_

Unit of Measure Volume

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system INVEST 3

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored Annually

Reporting Period Annually

Responsible Official(s) Planning, Programming and Information Staff

**Description:** The amount of volume sold annually that is below cost will be monitored. This information will be monitored to predict whether Forest Plan assumptions and expected outputs are correct. The Forest Plan predicted that 15 percent of the ASQ volume would be below cost.

**Methods:** For all timber sales an INVEST 3 model will be run that will demonstrate the economics of the timber sale. This model will demonstrate whether the sale is below cost or not. Costs and benefits are based upon Forest Plan values.

The Forest Economist is responsible for compiling the information from the Districts and from Planning's documentation and preparing the annual report.

## **WILDLIFE**

Program Wildlife - Management Indicator Species (MIS)

Activity, Practice or Effect Elk Population Trends

Activity Code CW1 MAR Number NA

Unit of Measure Elk

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** The annual elk population estimates made by the Idaho Department of Fish and Game will be monitored. Elk is an indicator for species dependent upon general forest habitat. Managing for elk habitat provides habitat for all species that occur in some part of elk habitat. Over the 50-year Planning Horizon the quantity of elk habitat is not expected to change significantly. Elk habitat will remain adequately distributed throughout the Forest, but human activity has the potential to reduce elk habitat quality in some areas of the Forest if not managed. Elk populations are currently lower than the capability of the habitat. Elk populations are projected to increase or be maintained.

The information obtained from the IDFG will allow the line officer to determine if elk populations objectives are being met (or at a minimum maintained) and other wildlife populations dependent upon elk habitat are being maintained at the level required to implement the Forest plan. When combined with Elk Habitat Effectiveness ratings, population estimates will allow the line officer to develop future decisions to provide the habitat for meeting planning objectives.

There will be further evaluation and/or change in management direction if there is a 20 percent deviation from IDFG 1986 population estimates.

**Methods:** The information on elk population estimates will be gathered annually by IDFG. The IDFG estimate elk populations annually by Elk Management Unit. The data will be quantified in report form. The Forest Wildlife Biologist is responsible for monitoring the elk population trends on the Forest.



Program Wildlife - Habitat Quality

Activity, Practice or Effect Elk Habitat Effectiveness (EHE) Rating

Activity Code CW1 MAR Number NA

Unit of Measure EHE

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 5 years

Reporting Period 5 years

Responsible Official(s) RWSWM Staff

**Description:** The Elk Habitat Effectiveness (EHE) rating will be monitored in each Issue Reporting Area. Habitat quality is being monitored to determine habitat effectiveness for elk. This information will allow future decisions to be made that provide for attainment of elk habitat objectives.

There will be further evaluation and/or a change in management direction when greater than 5 percent of the Issue Reporting Areas in any level one have a lower EHE rating than the goal EHE rating.

Forest Plan Standards and Guidelines EHE Goals are as follows:

Elk Management Unit 1 - Summer weighted average EHE will exceed 52.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
211	20	216	57
212	56	218	61
213	42	219	20
214	52	220	59
215	52	221	48

Elk Management Unit 2 - Summer weighted average EHE will exceed 69.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
202	80	207	41
203	89	208	68
205	47	209	83
206	48		

Elk Management Unit 3 - Summer weighted average EHE will exceed 59.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
119	43	130	80
120	38	131	24
128	89	132	45
129	86		

Elk Management Unit 4 - Summer weighted average EHE will exceed 52.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
108	20	118	44
109	40	121	32
110	56	122	38
111	43	123	20
112	63	124	60
114	40	125	57
115	39	126	83
117	44	127	64

Elk Management Unit 5 - Summer weighted average EHE will exceed 66.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
102	79	105	59
103	20	106	47
104	55	107	20

Elk Management Unit 6 - Unit will remain roadless and will have no management activities which will lower the EHE.

Elk Management Unit 7 - Summer weighted average EHE will exceed 59.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
305	90	312	92
309	93	315	28
310	58	320	30
311	39	372	80

Elk Management Unit 8 - Summer weighted average EHE will exceed 28.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
313	25	317	20
314	34	318	30
316	32	319	31

Elk Management Unit 9 - Summer weighted average EHE will exceed 53.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
152	31	155	32
153	45	156	68
154	52	157	53

Elk Management Unit 10 - Summer weighted average EHE will exceed 52.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
158	56	164	37
160	64	165	62
161	61	166	52
162	31	167	53
163	43		

Elk Management Unit 11 - Summer weighted average EHE will exceed 70.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
351	90	362	85
352	90	365	30
356	85	366	30
358	90	369	70
359	75	373	85

Elk Management Unit 12 - Summer weighted average EHE will exceed 60.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
363	65	444	45
367	70	447	45

Elk Management Unit 13 - Summer weighted average EHE will exceed 70.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
427	68	446	76
435	90	449	92
436	92	450	84
437	72	451	81
438	92		

Elk Management Units 14 and 15 - Summer weighted average EHE will exceed 70.  
Management activities are limited.

Elk Management Unit 16 - No development activities will take place in this EMU.  
The EHE will be maintained or enhanced.

Elk Management Unit 17 - Summer weighted average EHE will exceed 68.

<u>IRA</u>	<u>Target EHE</u>	<u>IRA</u>	<u>Target EHE</u>
453	84	456	20
454	31	457	98
455	91		

Elk Management Units 18, 19, 20, and 21 - Summer weighted average EHE will  
exceed 50 by EMU. Management activities are limited.

Elk Management Unit 22 - Summer weighted average EHE will exceed 70.  
Development limited to mining activity.

Elk Management Unit 23 - Summer weighted average EHE will exceed 70.  
Development limited to mining activity.

**Methods:** The data will be compiled from updated forest planning data concerning forest and nonforested stands and open road densities. The vegetative data will be collected by the Districts Timber Staff during stand exam inventories and will be passed on to the Forest Timber Staff who will supply the information to the Forest Wildlife Biologist. Open road density information will be provided annually by the Districts. The Forest Wildlife Biologist will analyze the data using the Elk Habitat Effectiveness model and provide a quantified report every five years.

Program Wildlife

Activity, Practice or Effect Seasonal Open Road Density

Activity Code CW221 MAR Number \_\_\_\_\_

Unit of Measure Open Road Density

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** Summer or general hunting open road density by Elk Management Unit (EMU) will be monitored to determine if adequate security habitat for elk is being maintained. This information will allow future decisions to be made to meet wildlife objectives.

This monitoring is accomplished in conjunction with Facilities - Transportation Operations - Access Management and will also be used with Wildlife - Long Term Road Access Management.

There will be further evaluation and/or change in management direction if summer or general open road density exceeds EMU direction identified in the Standards and Guidelines in more than one EMU or by more than 10 percent in any one EMU.

Open Road Density Goals by EMU are:

Elk Management Unit 1 - Summer open road density not to exceed 2.1. miles per section (mi/sec). General deer hunting season open road density will not exceed 1.1 mi/sec.

Elk Management Unit 2 - Summer open road density not to exceed 0.9 mi/sec. General elk and deer hunting season open road density will not exceed 0.5 mi/sec. Access into Cuddy Mountain Roadless Area will be restricted between major scheduled timber sales. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 3 - Summer open road density not to exceed 1.8 mi/sec. General elk and deer hunting season open road density will not exceed 1.3. mi/sec. Access into Cuddy Mountain Roadless Area will be restricted between major scheduled timber sales. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 4 - Summer open road density not to exceed 2.3. mi/sec. General elk and deer hunting season open road density will not exceed 1.5 mi/sec. Access into Cuddy Mountain Roadless Area will be

restricted between major scheduled timber sales. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 5 - Summer open road density not to exceed 0.6 mi/sec. General elk and deer hunting season open road density will not exceed 0.4 mi/sec. Access into parts of the Seven Devils/Hells Canyon Roadless Area will be restricted between major scheduled timber sales. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 6 - This Elk Management Unit will remain roadless.

Elk Management Unit 7 - Summer open road density for the area consisting of IRAs 310, 311, 312, 315, 320, and 368 will not exceed 2.3 mi/sec. General elk and deer hunting season open road density will not exceed 1.5 mi/sec and there will be no roads open in IRAs 305, 309, and 372. Access into IRAs 305, 309, and 372 will be restricted between major scheduled timber sales. During active timber sales, only roads necessary for timber management activities will be open. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 8 - Summer open road density not to exceed 3.1 mi/sec. General elk and deer hunting season open road density will not exceed 1.5 mi/sec.

Elk Management Unit 9 - Summer open road density not to exceed 2.6 mi/sec. General elk and deer hunting season open road density will not exceed 1.5 mi/sec.

Elk Management Unit 10 - Summer open road density not to exceed 2.3 mi/sec. General elk and deer hunting season open road density will not exceed 1.5 mi/sec.

Elk Management Unit 11 - Summer open road density not to exceed 2.3 mi/sec in the timber managed portion (excludes semi-primitive) of the EMU. General elk and deer hunting season open road density will not exceed 1.5 mi/sec in the timber managed portion (excludes semi-primitive) of the EMU. Access into the Patrick Butte Roadless Area will be restricted between major scheduled timber sales with an extended closure. Catastrophic events causing concentrations of tree mortality may initiate an analysis to open the area for one year to recover timber value.

Elk Management Unit 12 - Summer open road density not to exceed 2.3 mi/sec in the timber managed portion (excludes semi-primitive) of the EMU. General elk and deer hunting season open road density will not exceed 1.5 mi/sec in the timber managed portion (excludes semi-primitive) of the EMU.

Elk Management Unit 13 - Summer open road density not to exceed 0.7 mi/sec. General elk and deer hunting season open road density will not exceed 0.7 mi/sec.

Elk Management Units 14 and 15 - Management activities in this EMU are limited. Access management will be addressed in project-level planning and should be maintain or reduce current open road densities during summer and/or general hunting season. Access into existing roadless areas will be restricted between major timber sale entries.

Elk Management Unit 16 - No development activities will take place in this EMU.

Elk Management Unit 17 - Summer open road density not to exceed 1.1 mi/sec. General elk and deer hunting season open road density will not exceed 0.7 mi/sec.

Elk Management Units 18, 19, 20, and 21 - Management activities in these EMUs are limited. Access management will be addressed in project level planning and should maintain or reduce current open road densities during summer and/or general hunting season. Access into existing roadless areas will be restricted between major timber sale entries.

Elk Management Unit 22 - Development in this area is limited to mining activity. Access management will be addressed in individual operating plans and annual Forest Travel Map.

Elk Management Unit 23 - Development in this area is limited to mining activity. Access management will be addressed in individual operating plans and annual Forest Travel Map.

**Methods:** Information on open road densities will be gathered from the annual travel plan and project environmental assessments. The Districts will be gathering data on open road densities and will be responsible for preparing the annual travel plan. The Forest Wildlife Biologist will analyze the information and prepare an annual report of the open road densities by EMU.

Program Wildlife

Activity, Practice or Effect Long Term Road Access Management

Activity Code CW1 MAR Number 37.

Unit of Measure Open Road Densities

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) District Rangers

**Description:** Long term open road densities (long term closures) by Elk Managment Units (EMUs) are monitored to ensure that adequate security habitat is maintained for elk. This information will allow for future decisions to be modified in order to improve big game habitat security.

There will be further evaluation if open road densities exceed 1.5 miles of road per square mile in any EMU.

**Methods:** The districts will gather data on open road densities and prepare the annual travel plan. The Forest Wildlife Biologist will utilize the annual travel plan to annually assess the adequacy of open road densities for elk habitat security and prepare an annual report.

Program Wildlife

Activity, Practice or Effect Wildlife Habitat Improvements

Activity Code CW1 MAR Number 37.1 and 37.2

Unit of Measure Acres and Structures

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Management Attainment Report

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** Wildlife habitat improvement projects consist of prescribed burns (acres) and construction of structures. Wildlife habitat improvement projects will be monitored annually and compared with activities projected in the Forest Plan.

This monitoring will provide a comparison of planned habitat improvements and those that are implemented. Planned habitat improvements are listed in the Activity Schedule of the Forest Plan.

**Methods:** The Forest Wildlife Biologist will review annual wildlife habitat improvement accomplishments and compare these accomplishments to the Forest Plan activities schedule. The Biologist will also prepare an annual report summarizing this comparison.



Program Wildlife

Activity, Practice or Effect Cover Coefficients

Activity Code CW1 MAR Number NA

Unit of Measure Cover Coefficients

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10 years

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Changes in cover coefficients by Management Areas are monitored to reflect wildlife habitat security. Cover coefficients are used to estimate the average percentage of elk hiding cover by timber stand. This information will be used to determine if elk habitat effectiveness goals are met for each Management Area.

There will be further evaluation and/or change in management direction if there is a deviation of 10 percent from the cover coefficients existing at the beginning of plan implementation.

**Methods:** District's Timber Staff will conduct field inventory of timber strata ten years following implementation of the plan. The inventory will be given to the Forest Timber Staff who will pass the information on to the Forest Wildlife Staff in order to update cover coefficients. The information will be compared to cover coefficients that existed at the beginning of the planning period and an evaluation will occur by the Forest Wildlife Biologist. This information will be used during the revision of the Forest Plan.

Program Wildlife - Habitat Diversity

Activity, Practice or Effect Old Growth Coefficients

Activity Code CW1 MAR Number NA

Unit of Measure Acres of Old Growth by Management Area

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10 years

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Changes in old growth coefficient by Management Area will be monitored by Management Areas. Old growth coefficients reflect the average percent of old growth dependent species by Management Area. This information will be used to determine if the habitat of old growth dependent species is being met.

Acres of old growth and mature forest are also reported in Wildlife - Habitat Diversity - Acres and Proportions of Plant Successional Species.

There will be further evaluation and/or change in management direction if there is a deviation of greater than ten percent from current old growth coefficients.

**Methods:** District's Timber Staff will conduct field check of timber strata ten years following plan implementation. This information will be given to the Forest Timber Staff who will pass the information on to the Forest Wildlife Biologist who will update the old growth cover coefficients.

Program Wildlife - Habitat Diversity

Activity, Practice or Effect Old Growth Habitat Needs - Pileated Woodpecker

Activity Code CW1 MAR Number NA

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 5 years

Reporting Period 5 years

Responsible Official(s) RWSWM Staff

**Description:** The percentage of old growth and mature forest within each theoretical pileated woodpecker home range will be monitored. The pileated woodpecker is a Management Indicator Species (MIS) for old growth and mature forest habitat. Adequate amounts of old growth and mature forest are necessary to maintain wildlife dependent upon these habitat types. This information will allow forest managers to determine if adequate amounts and distribution of old growth are being maintained across the forest within pileated woodpecker habitat. Forest Plan Standards and Guidelines (p. IV-34) state that the old growth stands must be at least 30 acres in size.

There will be further evaluation and/or change in management direction when less than six percent of the forest vegetation is old growth and mature forest in less than five percent of the 10 mile diameter pileated woodpecker flight distance is not maintained. This will assure the habitat is distributed throughout the ten mile diameter pileated woodpecker flight distance.

**Methods:** Information will be gathered from forest vegetative data within areas identified as theoretical pileated woodpecker home ranges. Through habitat diversity modeling which takes into account the percentage and juxtaposition of the old growth and mature stands habitat, a trend will be displayed in old growth and mature stands acres and percentages by theoretical pileated home range. The Forest Wildlife Biologist is responsible for modeling the habitat diversity and reporting the results every five years.

Program Wildlife - Habitat Diversity

Activity, Practice or Effect Snag Habitat Needs - Williamson's Sapsucker

Activity Code CW1 MAR Number NA

Unit of Measure Wildlife Tree Density

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 5 years

Reporting Period 5 years

Responsible Official(s) RWSWM Staff

**Description:** Wildlife tree densities in timber sale areas will be monitored in order to allow managers to maintain Williamson's sapsuckers and other wildlife dependent upon snags. The Williamson's sapsucker is a Management Indicator Specie (MIS) that resrepresents those species dependent upon snag habitat. Determination of tree densities will allow future decisions to be made to provide adequate amounts of habitat.

There will be further evaluation and/or change in management direction if wildlife tree densities in timber sale areas are less than levels specified by the Forest Plan Standards and Guidelines. Following is an excerpt from the Standards and Guidelines.

Mixed Conifer Ponderosa Pine Spruce		Number of Trees per 100 acres	Lodgepole Pine Subalpine Fir		Number of Trees per 100 acres
DBH	Height	Non-Riparian (60%)	DBH	Height	Non-Riparian (60%)
20"	31'	8	-	-	-
12"	30'	82	12"	30'	35
10"	15'	45	10"	15'	73
Total		135			108
DBH	Height	Riparian (80%)	DBH	Height	Riparian (80%)
20"	31'	11	-	-	-
12"	30'	109	12"	30'	109
10"	15'	60	10"	15'	24
Total		180			133

**Methods:** District's Timber Staff will provide estimates of wildlife tree densities by riparian and nonriparian areas and forest type for each completed sale through use of wildlife tree exams. The exams will be conducted following the closure of the timber sale contract on an annual basis. The data will be provided to Forest Wildlife Biologist who will prepare an annual report of the results and assess the conditions every 5 years.

Program Wildlife - Habitat Diversity

Activity, Practice or Effect Early Plant Succession Needs - Vesper Sparrow

Activity Code CW1 MAR Number NA

Unit of Measure Acres in the early plant successional stage

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 5 years

Reporting Period 5 years

Responsible Official(s) RWSWM Staff

**Description:** The percentage of grass-forb and shrub-seedling age classes by Management Area will be monitored because this age class is important to some wildlife species. The Management Indicator Species (MIS) for the grass-forb and shrub seedling age classes is the vesper sparrow. Monitoring of the acres in the early successional stages will allow forest managers to determine if appropriate amounts and distribution of successional stages are present by Management Area.

This information is also collected under Wildlife - Habitat Diversity - Acres and Proportion of Plant Successional Stages.

There will be further evaluation and/or change in management direction if greater than 20 percent of suitable timberland exists in the grass-forb and shrub-seedling age classes in any Management Area at the end of the decade.

**Methods:** Information on the amount of grass-forb and shrub-seedling age classes will be gathered from District's stand exam data collected by the District Timber Staff. This information will be given to the SO Wildlife Biologist who will evaluate the amount and the juxtaposition by Management Area every five years. Through habitat diversity modeling a trend will be displayed that takes into account the percentage in early successional stages and the juxtaposition of the age class by Management Area.

Program Wildlife - Habitat Diversity

Activity, Practice or Effect Acres and Proportion of Plant Successional Stages

Activity Code CW1 MAR Number NA

Unit of Measure Acres and Percentage by Successional Stage

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 5 Years

Reporting Period 5 Years

Responsible Official(s) RWSWM Staff

**Description:** The acres and percentage of plant successional stages will be monitored by Management Area. This monitoring will allow managers to determine if adequate habitat is provided for a variety of wildlife species. This information will allow forest managers to determine the amount and distribution of successional stages present by Management Area.

This information will be used in monitoring Wildlife - Habitat Diversity - Early Plant Succession Needs - Vesper Sparrow and Wildlife - Habitat Diversity - Old Growth Coefficients.

There will be further evaluation and/or a change in management direction if greater than 15 percent of an individual management area is in the old growth successional stage or less than 30 percent of the management area is in the grass-forb and shrub-seedling stages of plant succession and/or if there is a 20 percent variation in existing acres available by successional stages.

**Methods:** Information will be gathered from forest stand exam data by Management Area. This information is collected by the District's Timber Staff and will be provided to the Forest Timber Staff and passed on the Forest Wildlife Biologist. The Forest Wildlife Biologist will analyze the data and report every 5 years. Through analyzing the proportion of plant successional stages on the Forest, change over time will be evident.

Program Wildlife

Activity, Practice or Effect Threatened and Endangered Animal Species

Activity Code CT1 MAR Number 39

Unit of Measure Species Counts and EA and EIS Review

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** The number of reports of threatened and endangered species from the U.S. Fish and Wildlife Service (USFWS) and the Forest Service will be monitored. Environmental Assessment and Environmental Impact Statement documents will be review to ensure consultation with the USFWS has occurred as needed. Threatened and Endangered Species that occur on the Forest are the Bald Eagle, Peregrine Falcon and Northern Rocky Mountain Wolf.

This information is necessary in order to meet Endangered Species Act of 1973.

There will be further evaluation and/or change in management direction if adequate consultation with the USFWS has not occurred and if the Forest has not worked toward the conservation of Threatened and Endangered Species. Management Direction would be reevaluated if there is an increase by 100 percent in the number of wolf reports in the Payette portion of the South Fork Salmon River drainage or if there is significant increases in the number of Threatened and Endangered Species reports on the Forest. A Jeopardy Opinion by the USFWS would also provide the Forest a means of assessing the need for new direction.

**Methods:** The District Rangers working in conjunction with Forest Wildlife Biologist will be responsible for monitoring for Threatened and Endangered Species. The District Rangers will be responsible to insure that all projects have adequate Threatened and Endangered Species input. The Forest Wildlife Biologist will be responsible for coordinating with Districts and the USFWS and keeping track of species reports. A narrative will be prepared annually by the Forest Wildlife Biologist.

Program Wildlife

Activity, Practice or Effect Threatened and Endangered Plant Species

Activity Code CT1 MAR Number NA

Unit of Measure \_\_\_\_\_

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** Threatened, endangered and sensitive plant species will be monitored on the Forest.

This information is necessary in order to meet the Endangered Species Act of 1973.

There will be further evaluation and/or change in management direction if there is a jeopardy opinion by the U.S. Fish and Wildlife Service (USFWS), confirmed Threatened and Endangered Species Reports or degradation of sensitive species habitat.

**Methods:** Project NEPA documents will be reviewed by the USFWS for impacts on threatened, endangered and sensitive plant species. Biological Opinions submitted by the USFWS will be reviewed by the Forest Wildlife Biologist.

The Forest Wildlife Biologist will annually report on the status of threatened, endangered and sensitive plant species.



## **FISHERIES**

Program Fisheries

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Activity, Practice or Effect Management Indicator Species (MIS) Abundance

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Activity Code CF1 MAR Number NA

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Unit of Measure Population Estimates (#s)

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Is this item also tracked in another automated system? No If yes,  
 what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes

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Frequency Item is Monitored Annual

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Reporting Period Annual

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Responsible Official(s) RWSWM Staff and District Rangers

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**Description:** Fish Management Indicator Species (MIS) populations will be monitored for the stream reaches listed on pages 97 and 98 (CF1 Activity 1). Management Indicator Species (MIS) are species selected because its population changes indicate effects of management activities on the plant and animal community. They are species whose condition can be used to assess the impacts of management actions on a particular area.

There will be a further evaluation and/or a change in management direction if there is non-attainment by the end of the decade of predicted results described in the Habitat Objectives for specific drainages listed on pages 101 and 102.

#### Drainages with Resident Trout and Anadromous Salmonid MIS

<u>Stream Reach</u>	<u>Management Indicator Species</u>
Deep Creek	RBT,SH,CH
Boulder Creek	RBT,SH,CH,BTT
Hazard Creek	RBT,BTT
Hard Creek	RBT,SH,CH,BTT
Rapid River	RBT,SH,CH,BTT
Lake Creek	RBT,SH,BTT
Partidge Creek	RBT,SH,BTT
Elkhorn Creek	RBT,SH,BTT
French Creek	RBT,SH,BTT
Warren Creek	RBT,SH,CH
South Fork Salmon River	RBT,SH,CH,BTT,CTT
Misc. Franch Church--River of No	RBT,SH,CH,BTT,CTT
Return Wilderness Streams and Big Creek and its tributaries	

Management Indicator Species (MIS):  
 RBT - Redband Trout  
 CTT - Westslope Cutthroat Trout  
 BTT - Bull Trout ("Dolly Varden")  
 SH - Steelhead Trout  
 CH - Chinook Salmon

**Methods:** Chinook salmon and steelhead trout adult numbers will be obtained annually by the Forest Fisheries Biologist from Idaho Fish and Game (IDFG), the Nez Perce Nation, and the Corps of Engineers. Enumeration will be for spawning areas in Big Creek and the South Fork Salmon River drainages. Adult counts from the Rapid River trap and South Fork Salmon River trap will be obtained. Dam counts from ladders in Snake and Columbia River dams will be compiled.

Juveniles counts of salmon steelhead and other Management Indicator Species will be made annually in the other streams listed below under an Memorandum of Understanding (MOU) with IDFG. The Forest Fisheries Biologist will develop the annual MOU and conduct counts not completed by IDFG. These counts, as a minimum, will be done using snorkeling counts of known stream areas.

Downstream migration of salmon and steelhead smolts will be enumerated annually by collecting data from the National Marine Fisheries Service. Utilization of all MIS will be determined by compiling Wildlife and Fish User Days (WFUDS) for fishing from the Recreation Information Management (RIM) report at the end of 10 years of Plan implementation. The Forest Fisheries Biologist will be responsible for these compiling the information and preparing the annual report.

Program Fisheries

Activity, Practice or Effect Fisheries Habitat Objectives

Activity Code CF1 MAR Number NA

Unit of Measure Habitat Parameters

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Year 5, 10 and 15 from Forest Plan implementation

Responsible Official(s) RWSWM Staff

**Description:** Instream monitoring will be conducted of physical and biological habitat parameters to determine whether Forest objectives identified in Table IV-F1 of the Forest Plan are being met. The streams that will be monitored and habitat objectives for these streams are listed on pages 101 and 102. This monitoring is accomplished in conjunction with Soil and Water - Baseline Monitoring - Water Quality Trend.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction if there is non-attainment of habitat objectives in any drainage at year 5, 10 or 15 from Forest Plan implementation.

**Methods:** At year 4, 9 and 15 of Plan implementation the Forest Fisheries Biologist integrates all other monitoring and inventory conducted on the Forest during Plan implementation into one Forest-wide report in order to assess whether integrated habitat objectives are met for every drainage on the Forest.

In addition, the Forest Fisheries Biologist annually obtains trend samples of macroinvertebrates from about 25 locations on the Forest. These are annually analyzed and reported. Locations will be determined in an annual monitoring plan and distributed, so as not to duplicate samples taken for monitoring fire, mining, or other effects.

The Forest Biologist also trains district crews to assure that inventory data is collected to FSH 2609.23 standards, so that Level 1 and Level 2 Riparian inventory can be periodically repeated during project inventory. This repetition will allow the data to be compared over time.

Program Fisheries

Activity, Practice or Effect Direct Investment - Fish Habitat Improvements

Activity Code CF1 MAR Number 38.1 and 38.2

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Fisheries habitat improvement projects will be monitored to assess whether the project obtained the stated objectives. Monitoring will be emphasized in the drainages listed for Direct Investment monitoring (CF1 Activity 3) on pages 97 and 98.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction of fisheries habitat improvement projects if there is non-attainment of stated project objectives for more than 20 percent of project acres or structures.

**Methods:** Fish habitat improvement projects that are implemented will be documented by the Zone Fisheries Biologist with a minimum of before and after photographs. These photographs in addition to on-site evaluations, will be used to document whether project objectives were met on every project. These reports will be prepared annually by Zone Fisheries Biologist. Annually, the Forest Fisheries Biologist will compile and summarize the reports which will document the effectiveness of all fish habitat improvement projects implemented in the year.

Program Fisheries - Implementation Monitoring

Activity, Practice or Effect Effects of Fire on Fish Habitat

Activity Code CF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Coordination of fire activities with fisheries will be monitored by evaluating the effects of fire on fish habitat. Monitoring will occur in the stream reaches listed for Fire Coordination (CF1 Activity 4) on pages 97 and 98.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or a change in management direction of the coordination of fire management with fisheries if there is non-attainment of more than 20 percent of fire activities with Standards and Guidelines.

**Methods:** Aquatic parameters in burned areas will be monitored at least to FSH 2609.23 (R4, 3/85) standards. Emphasis in 1989 and 1990 will be to quantitatively monitor the effects of fire on streams in the Frank Church - River of No Return Wilderness. This work will be conducted under cooperative agreements with Idaho State University (ISU). Comparison of burned and unburned drainages over time will be made. An annual report will be prepared by the SO Fisheries Biologist. Agreements with ISU will be prepared and administered by the Forest Fisheries Biologist. This data will be used as background information on the effects of natural fires on fish habitat.

Comparisons will qualitatively be made to other areas prescribed burned on the Forest. Interdisciplinary review of prescribed burn areas will occur annually in watersheds selected from the drainages listed for Fire Coordination (CF1 Activity 4) pages 97 and 98. As a minimum, photographic documentation will be done. Zone Fisheries Biologists will conduct this work.

Annually, project fires will be reviewed with fisheries input as part of the rehabilitation process found in FSH 2509.13. Emergency burn area and suppression related rehabilitation will be documented with a minimum of

photographs. Special attention will be given to documenting riparian and stream area burns and/or rehabilitation effort. Responsibilities are found in the description of Resource Advisor duties in the Incident Command handbook and in the Emergency Burn Area handbook.

See FSH 2609.23 (R4, 3/85), FSH 2509.13 and above descriptions.

The Forest Fisheries Biologist will review, compile and report the data.

Program Fisheries

Activity, Practice or Effect Effects of Mineral Management on Fish Habitat

Activity Code CF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Coordination of minerals activities with fisheries will be monitored by evaluating the effects of minerals management on fish habitat and implementation of Soil and Water Conservation Practices (SWCPs). Monitoring will be emphasized in the drainages listed for Mineral Coordination (CF1 Activity 5) on page 97 and 98. Monitoring activities will be coordinated with Watershed Management and identified prior to the field season.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction in the coordination of mining activities with fisheries if there is non-attainment for more than 20 percent of activities with Standards and Guidelines.

**Methods:** Implementation of SWCPs for mining activities will be monitored by an interdisciplinary team that includes a Zone Fisheries Biologist. Annually, project surveillance and photographs will occur at Stibnite, Thunder Mt., Warren, Redledge, Cuprum Mines, any similar major mining area and representative small mining operations. As a minimum, an implementation checklist will be completed for each of these projects and all active placer mines, or placer mines under reclamation in drainages with anadromous fish habitat.

The effects of mining activities on fish habitat will be monitored by collecting stream substrate and macroinvertebrate data annually in streams associated with major mining areas. Sampling will be done, as a minimum, to FSH 2609.23 (3/85) standards or to the standards of historically collected data, whichever is greater.

The locations that will be sampled and the standards of the sampling will be reviewed annually. Tentative sampling locations are indicated on page 99 and



100. Locations and data will be coordinated with Watershed Management who will be responsible for collecting some of the monitoring data. This sampling will be coordinated annually with other water quality sampling performed by the Idaho Department of Health and Welfare - Department of the Environment and fish population estimates collected by Idaho Department of Fish and Game.

Also, data that is obtained from monitoring the Habitat Objectives for Fisheries will be incorporated when assessing the effects of mining activities on fish habitat.

Program Fisheries - Implementation Monitoring

Activity, Practice or Effect Effects of Soil and Water Activities on Fish Habitat

Activity Code CF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** The effects of Soil and Water Activities on fish habitat will be monitored for the drainages listed for Soil and Water Coordination (CF1 Activity 6) pages 97 and 98. The monitoring will consist of determining whether fish habitat is affected by watershed improvement projects and coordination with water rights projects.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction of the coordination of soil and water activities with fisheries if there is non-attainment of standards and guidelines for more than 20 percent of soil and water activities on the Forest.

**Methods:**

Projects: Zone Fisheries Biologists will annually monitor whether fish habitat is affected by watershed improvement projects. Monitoring will consist of project surveillance and photographs of watershed improvements and will be accomplished by either the Zone Fisheries Biologists or Hydrologists. The biologist will prepare an informal letter documenting effects of every project by District. The report will be based on either a field interdisciplinary review or by studying photographs of the project while in the office.

Water Rights: During any water right proceeding on the Forest, the Forest Fisheries Biologist will be appointed to the team evaluating water developments or rights. As a part of that proceeding the biologist will develop monitoring necessary to meet FSH 2609.23 (R4, 3/85) standards, as a minimum. (Note that when cost guides for the Plan were developed the Snake River adjudication was not anticipated. Because this is the largest adjudication in the U.S., more time and expense will be required than had originally been envisioned.)

Evaluation of this monitoring item will also incorporate information from the Habitat Objectives monitoring for Fisheries.

The Forest Fisheries Biologist will review, compile and report the information.

Program Fisheries

Activity, Practice or Effect Effects of Timber Management on Fish Habitat

Activity Code CF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Timber Staff and District Rangers

**Description:** Coordination of timber management activities with fisheries will be monitored by evaluating the effects of timber management on fish habitat and the implementation of Soil and Water Conservation Practices (SWCPs).

The effects of timber management on fish habitat will be monitored in the drainages listed for Timber Coordination (CF1 Activity 7) pages 97 and 98. Drainages in which monitoring will occur will be selected annually by the Forest Fish Biologist and will be defined in the Soil and Water Annual Monitoring Plan. This monitoring will be accomplished in conjunction with Soil and Water - Baseline Monitoring - Stream Channel Conditions.

Implementation of Soil and Water Conservation Practices (SWCPs) will be monitored on 25 percent of disturbed acres forest-wide annually. The acres to be monitored will be chosen from the drainages listed on page 97 and 98 for Timber Coordination (CF1 Activity 7).

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint Source Pollution Control.

There will be further evaluation and/or change in management direction if there is non-attainment for more than 20 percent of activities with Standards and Guidelines or as specified for the South Fork Salmon River.

**Methods:** Implementation of SWCPs for timber management activities on 25 percent of disturbed acres forestwide will be monitored by an interdisciplinary team including a Zone fisheries biologist. This monitoring will occur on 25 percent of disturbed acres forestwide in the drainages listed above. Monitoring will consist of photographs and completion of an implementation checklist.

The effects of timber management on fish habitat will be monitored by collecting data on stream substrate, large organic debris, and stream channel morphology. The locations that will be sampled and the standards of the sampling will be reviewed annually. Locations and data will be coordinated with Watershed Management who will be responsible for collecting some of the monitoring data. During the annual review of the location and standards, responsibilities will be defined for Fisheries and Watershed Management.

Sampling for French Creek, Boulder Creek, tributary to the Little Salmon River, and the South Fork Salmon River will be the minimum conducted in the equivalent of locations described on page 99 and 100.

This monitoring will be conducted to FSH 2609.23 (3/85) standards or to the standards by which historical data was collected in a drainage, whichever is greater. An annual report will be prepared by the Zone biologists, analyzing all data collected.

Also, data that is obtained from monitoring the Habitat Objectives for Fisheries will be incorporated into assessing the effects of timber management on fish habitat.

The Forest Fisheries Biologist will review, compile and report the information for the annual report.

Program Fisheries

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Activity, Practice or Effect Effects of Range Management on Fish Habitat

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Activity Code CF1 MAR Number NA

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Unit of Measure NA

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes

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Frequency Item is Monitored Annual

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Reporting Period Years 5, 10 and 15

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Responsible Official(s) RWSWM Staff

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**Description:** Coordination of Range Activities with Fisheries will be monitored by evaluating the effects of range management on fish habitat and implementation of Soil and Water Conservation Practices (SWCPs) for the stream reaches listed on pages 97 and 98 for Range Coordination (CF1 Activity 8).

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction if there is non-attainment of Standards and Guidelines for more than 20 percent of acres.

**Methods:** Implementation of SWCPs for range activities will be monitored by an interdisciplinary team including a Zone Fisheries Biologist for each allotment. Allotments that will be monitored will be designated prior to the field season. Allotment surveillance and photographs will be done on an average of acreage equivalent to 2.6 allotments per year.

The effects of range activities on fish habitat will be monitored by conducting measurements on habitat parameters inside and outside of riparian exclosures or in other demonstration areas in allotments. Annually, physical and biological measurements will occur on 5 riparian exclosures Forestwide. Riparian exclosures will include demonstration areas in Lake Creek, a tributary to the Secesh River, Little French Creek, Lost Creek, Beaver Creek, a tributary to the Weiser River, and Mill Creek, a tributary to Hornet Creek.

As a minimum, stream substrate, stream channel profile, and macroinvertebrates will be measured annually. These measurements will be conducted by Zone fisheries biologists to site specific standards found in FSH 2609.23 (3/85). Measurements will be coordinated with hydrologic measures and streamside

vegetation measures by other disciplines as described in the R4 riparian surveys handbook.

The data obtained from monitoring the Habitat Objectives of Fisheries will also be used to assess the effects of range management on the fisheries resource.

The Forest Fisheries Biologist will review and compile the information for the final report.

Program Fisheries

Activity, Practice or Effect Effects of Recreation Activities on Fish Habitat

Activity Code CF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** The effects of recreation activities on fish habitat will be monitored for the stream reaches listed for Recreation Coordination (CF1 Activity 9) on pages 97 and 98.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or a change in management direction if there is non-attainment of recreation activities with standards and guidelines.

**Methods:** Monitoring of recreation effects on fish habitat will be accomplished simultaneously with other monitoring of other resource coordination with fisheries. Recreation sites, trails and use areas that impact fish habitat will be photographed or documented in an informal letter. The narrative will document whether the observed activity is in compliance with Forest Plan standards and guidelines.

For example, in conjunction with alpine lakes fishery surveys and direct investment projects of fish habitat improvements that are conducted in cooperation with Idaho Department of Fish and Game, information will be collected on the effects of recreation activities on fish habitat. Zone fisheries biologists are responsible for documenting results of both the fishery survey of lakes and recreation effects annually.

Also, data obtained from monitoring Resource Objectives for Fisheries will be used to assess coordination of recreation activities with fisheries.

The Forest Fisheries Biologist will review, compile and report the information for the annual report.



Program Fisheries - Implementation Monitoring

Activity, Practice or Effect Effects of Special Use Activities on Fish Habitat

Activity Code CF1 MAR Number \_\_\_\_\_

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Sporadic

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** The effects of special use activities on fish habitat will be monitored on projects that vary from hydropower to irrigation ditches. Monitoring will be emphasized in the drainages listed for Special Use Coordination (CF1 Activity 10) on pages 97 and 98.

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction of coordination of special use projects with fisheries if there is non-attainment for more than 20 percent for any categories of use with Standards and Guidelines.

**Methods:** Prior to issuing or reissuing a special use permit in any of the drainages listed for Special Use Coordination on pages 97 and 98, the Zone Fisheries Biologists will prepare a monitoring plan as part of the NEPA process. The monitoring plan will consist of project surveillance and physical and biological measurements. Monitoring parameters will be dependent upon the type and site specific concerns for each project. The monitoring plan will normally be funded by the permittee. The Zone Fisheries Biologist will annually compile results of monitoring by the permittee and report them. As a minimum, FSH 2609.23 (R4, 3/85) standards will be used for all data collection.

The data obtained from monitoring the Habitat Objectives for Fisheries will also be used to assess the coordination of special use activities with Fisheries.

The Forest Fisheries Biologist will review, compile and report the information for the annual report.

Program Fisheries

Activity, Practice or Effect Effects of Facilities on Fish Habitat

Activity Code CF1 MAR Number \_\_\_\_\_

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** The effects of facilities on fish habitat will be monitored by evaluating the effects of road and trail construction and improvement projects on riparian. Emphasis will be given to roads in drainages with anadromous fish habitat and in those drainages indicated on pages 97 and 98 Facilities Coordination (CF1 Activity 11).

This monitoring will assure compliance with the Clean Water Act which requires monitoring to provide "the protection and propagation of a balanced population of shellfish, fish and wildlife". Idaho Code Section 39-105 and Section 39-107 provides direction to federal agencies on implementing the Clean Water Act. The Forest Service is required to comply with the Idaho Code under federal consistency defined in Section 313 of the Clean Air Act. Monitoring is also required under codes implementing Section 319 of the Clean Air Act - Nonpoint source pollution control.

There will be further evaluation and/or change in management direction of the coordination of facilities with fisheries if there is non-attainment for more than 20 percent of activities with Standards and Guidelines.

**Methods:** All road and trail encroachments on stream channels, fish passage and road maintenance practices will be documented for the drainages listed on pages 97 and 98 by the Zone Fisheries Biologists. Monitoring will occur on 90 percent of road crossings on fish bearing streams.

Zone Fisheries Biologists will annually report opportunities to improve existing conditions of roads and trails as projects are proposed for individual areas.

Also, data obtained from monitoring Habitat Objectives for Fisheries will be incorporated when assessing coordination of facilities with Fisheries.

The Forest Fisheries Biologist will review, compile and report the information for the annual report.

CF1	Activity
1	Management Indicator Species (MIS) Abundance
2	Habitat Objectives
3	Direct Investments (Fish Habitat Improvements)
4	Fire Coordination
5	Minerals Coordination
6	Soil and Water Coordination
7	Timber Coordination
8	Range Coordination
9	Recreation Coordination
10	Special Use Coordination
11	Facilities Coordination

Stream Reach	CF1 ACTIVITIES
<b>Snake River downstream from Hells Canyon Dam</b>	
Deep Creek	1,2,4,5,6,7,8
Salmon River	
Little Salmon River	
Lockwood Creek	4,6,7,8
Fall Creek	4,6,7,8
Boulder Creek **	1,2,3,4,6,7,8,9,11
Round Valley Creek	4,6,7,8
Mud Creek	4,6,7,8
Goose Creek	4,6,7,8,9,10
Threemile Creek	4,6,7,8
Sixmile Creek	4,6,7,8,10
Hazard Creek	1,2,3,4,5,6,7,8,9
Hard Creek	1,2,3,4,5,6,7,8,9
Elk Creek	4,6,7,8,9
Rapid River	1,2,4,6,8,9
Lake Creek	1,2,4,6,8,9
Partridge Creek	1,2,4,6,8,9
Elkhorn Creek	1,2,4,6,7,8
French Creek **	1,2,4,6,7,8,9
Fall Creek	4,6,7
Carey Creek	4,6,7
California Creek	2,4,5,6,
Cottontail Creek	4,5,6,7
Rabbit Creek	4,5,6,7
Warren Creek	1,2,4,5,6,7,10
South Fork Salmon River **	1,2,3,4,5,6,7,9,10,11
Misc. Frank Church--River of No Return Streams and Big Creek and its Tributaries	1,2,3,4,5,6,9,10

Stream Reach	CF1 ACTIVITIES
<b>Snake River upstream of Hells Canyon Dam</b>	
Indian Creek	2,4,5,6,7,8,10
Wildhorse River	2,3,4,5,6,7,8,10
Dukes Creek	4,5,6,7,8
Brownlee Creek	2,3,4,5,6,7,8,9,10
Benton Creek	4,6,7,8
Weiser River	2,3,4,5,6,7,8,8,9,10
Mann Creek	2,3,4,5,6,7,8,9
Keithly Creek	4,6,7,8
Pine Creek	4,6,7,8
Rush Creek	4,6,7,8,10
Goodrich Creek	4,6,7,8
Johnson Creek	4,6,7,8
Hornet Creek	2,4,6,7,8
West Fork Weiser River	2,4,6,7,8
Warm Springs Creek	4,6,7,8
West & East Branch Weiser River	2,4,6,7,8
Gaylord Creek	4,6,7,8
East Fork Weiser River	2,4,6,7,8,10
Mill Creek	4,6,7,8
Cottonwood Creek	4,6,7,8
Middle Fork Weiser River	2,3,4,6,7,8,9,11
Little Weiser River	2,3,4,6,7,8,9,11
North Fork Payette River	
Kennally Creek	2,4,6,7,8,9
Boulder Creek	4,6,7,8,9,10
Lake Fork Creek	2,3,4,6,7,8,9,11
McCall Municipal Watershed	
Fall Creek	4,6,7,8
Lemah Creek	4,6,7,8
Box Creek	4,6,7,8,10
Brush Creek	4,6,7,8
Pearl Creek	4,6,7,8
Twentymile Creek	4,6,7,8,9
Upper North Fork Payette River	2,3,4,6,7,8,9,10
Deep Creek	4,6,7,8
Fisher Creek	4,6,7,8,10
Deadhorse Creek	4,6,7,8
Wagon Bay Creek	4,6,7,8

The following list describes areas of special emphasis in monitoring fish habitat for both effects of timber management and implementation of BMPs. (Forest Plan pages V-14 to V-15.)

1) South Fork Salmon River

- a. Do field surveillance and photographic documentation of 100% of all ground disturbing actions.
- b. Intensively coordinate monitoring with Watershed.
- c. Cooperate with Other Agencies and Indian tribes to monitor fish abundance and trends.
- d. 400 core samples at 10 locations per year and measure embeddedness at 27 locations per year (400 measurements/location) annually including controls in Chamberlain Creek.

TENTATIVE SAMPLE LOCATIONS:

Core Sampling of 40 cores per year at the following locations for a total of 400 measurements per year.

Corduroy	Chinook
Three Mile	Glory
Burgdorf	Poverty
Secesh Meadows	Oxbow
Controls (two): Chamberlain Creek	

Embeddedness - 400 measurements per year at the following locations for a total of 10,800 measurements per year.

Mainstem SFSR at Knob Creek  
East Fork SFSR (lower)  
Elk Creek (possible control)  
East Fork SFSR (upper)  
Porphyry Creek (control)  
Tamarack Creek (control)  
Pony Creek  
East Fork SFSR (downstream from Sugar Creek)  
Bear Creek (control)  
SFSR at Glory  
Sheep Creek (control)  
Fitsum Creek  
Secesh River (downstream from Zena)  
NF Fitsum Creek  
Zena Creek  
Upper Fitsum Creek  
Cow Creek  
Buckhorn Creek  
Lick Creek  
West Fork Buckhorn Creek  
Secesh River (upstream from Lick Creek possible control)  
North Fork Buckhorn Creek  
Cougar Creek  
Grouse Creek  
Blackmare Creek (control)  
Three Mile Creek  
Fourmile Creek (possible control)

- e. Photographically document stream conditions.
- f. Document other physical fish habitat characteristics with transects and other appropriate techniques.
- g. Cooperate with research to refine information.

2) French Creek

- a. Do field surveillance and photographic documentation of 100% of all ground disturbing actions.
- b. Intensively coordinate monitoring with Watershed.
- c. Cooperate with Other Agencies and Indian tribes to monitor fish abundance and trends.
- d. Measure 6 locations for embeddedness, including controls, and compile added data available from BLM.

TENTATIVE SAMPLE LOCATIONS

Embeddedness measurements at the following locations each year:

3 locations in French Creek 1200 measurements

Controls:

Lake Creek 400 measurements

Partridge Creek 400 measurements

California Creek 400 measurements

- e. Photographically document stream conditions.
- f. Document other physical fish habitat characteristics with transects and other appropriate techniques.
- g. Cooperate with research to refine information.

3) Boulder Creek, in the Little Salmon River

- a. Do field surveillance and photographic documentation of 100% of all ground disturbing actions.
- b. Intensively coordinate monitoring with Watershed.
- c. Cooperate with Other Agencies and Indian tribes to monitor fish abundance and trends.
- d. Measure embeddedness at 6 locations, including controls.

TENTATIVE SAMPLE LOCATIONS

Embeddedness measurements at the following locations each year:

3 locations in Boulder Creek 1200 measurements

Controls:

3 locations in Rapid River 1200 measurements

- e. Photographically document stream conditions.
- f. Document other physical fish habitat characteristics with transects and other appropriate techniques.
- g. Cooperate with research to refine information.

This table describes the objectives for management of suitable fish habitat in streams or lakes on the Payette National Forest that will be monitored.

**Drainages with Resident Trout MIS to be Monitored**

Stream Reach	Management Indicator Species Suitable Habitat*	Fish Habitat Objectives*
<b>Snake River upstream of Hells Canyon Dam</b>	RBT	2
Indian Creek	RBT, BTT	4
Wildhorse River	RBT	4
Brownlee Creek	RBT	4
Weiser River	RBT	2
Mann Creek	RBT	4
Hornet Creek	RBT	4
West Fork Weiser River	RBT	4
West & East Branches Weiser River	RBT	4
East Fork Weiser River	RBT	4
Middle Fork Weiser River	RBT	4
Little Weiser River	RBT	4
North Fork Payette River	RBT	2
Kennally Creek	RBT	2
Lake Fork Creek	RBT	2
McCall Municipal Watershed	RBT	2
Upper North Fork Payette River	RBT	2

\*See key at end of table

**Drainages with Resident Trout and Anadromous Salmonid  
Management Indicator Species to be Monitored**

Stream Reach	Management Indicator Species Suitable Habitat*	Fish Habitat Objectives*
<b>Snake River downstream from Hells Canyon Dam</b>	All	2
Deep Creek	RBT, SH, CH	2
Salmon River	All	2
Little Salmon River	All	2
Boulder Creek	RBT, SH, CH, BTT	5
Hazard Creek	RBT, BTT	2
Hard Creek	RBT, SH, CH, BTT	2
Rapid River	RBT, SH, CH, BTT	1
Lake Creek	RBT, SH, BTT	2
Partridge Creek	RBT, SH, BTT	2
Elkhorn Creek	RBT, SH, BTT	3
French Creek	RBT, SH, BTT	3
California Creek	RBT, SH	2
Warren Creek	RBT, SH, CH	3
South Fork Salmon River	All	4
Grouse	RBT, CTT, SH	5
Pony Creek	RBT, SH	5
Elk Creek	All	5
Bear Creek	RBT, CTT, SH	1
Sheep Creek	RBT, CTT, SH	1

East Fork South Fork Salmon River	All	4
Upper East Fork South Fork Salmon River	All	5
Tamarack Creek	All	5
Upper Upper East Fork South Fork Salmon River	RBT, CTT	4
Secesh River	All	4
Zena Creek	RBT, SH	4
Cow Creek	CTT	4
Lick Creek	All	5
North Fork Lick Creek	RBT, SH, CTT	5
Upper Secesh River	All	4
Threemile Creek	All	5
Upper South Fork Salmon River	All	4
Fitsum Creek	All	4
North Fork Fitsum Creek	All	4
Buckhorn Creek	All	4
West Fork Buckhorn Creek	All	5
Cougar Creek	All	4
Fourmile Creek	All	5
Blackmare Creek	All	1
Miscellaneous Frank Church--River of No Return Wilderness Streams and Big Creek and its tributaries (defined at project level)	All	1,2***4

**\*Management Indicator Species:**

RBT - Redband Trout                      SH - Steelhead Trout  
CTT - Westslope Cutthroat Trout      CH - Chinook Salmon  
BTT - Bull Trout ("Dolly Varden")

**\*\* Fish Habitat Objectives Key:**

1 - Natural processes dominate fish habitat to such an extent that negative impacts due to human activities are perceptible only to highly trained and experienced professional fisheries biologists, and then those impacts are so small as to be unmeasurable without extreme expenditure. Impacts can be photographed, such as riparian damage around alpine lakes, but mitigating actions are taken to restore natural processes. This is crudely equivalent to maintaining 99 percent of the natural or inherent capability of fish habitat.

2 - Impacts of man's actions are readily perceptible to many professional observers, but not measurable utilizing commonly applied technologies. Extreme expenditure would be required to measure actual impacts. This is crudely equivalent to maintaining 90 percent of the existing habitat condition. This is applicable only in Big Creek and Monumental Creek outside of the Frank Church River of No Return Wilderness.

3 - Impacts of man's actions are readily perceptible to most professional observers. Measurements, utilizing commonly applied technologies, can distinguish some significant areas of habitat which are not in a natural or undisturbed condition. However, impacts are not catastrophic, extending to most areas of habitat or a major portion of habitat within a drainage.

4 - The existing habitat is improved. The degree of improvement will depend on objectives defined for each drainage area at the project level of planning. Improvement can occur due to coordination with other resources or by direct investment in fish habitat.

5 - All new sources of potential damage to fish habitat are planned to be fully compensated at the project level.



## SOIL AND WATER

Program Soil and Water - Baseline Monitoring

Activity, Practice or Effect Hydrometeorological Monitoring - Precipitation

Activity Code FW121 MAR Number NA

Unit of Measure Inches of Water

Is this item also tracked in another automated system? No If yes,  
 what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Dependent upon gage type

Reporting Period 5 years

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Climatic stations and snowcourses on or near the Forest are operated by the National Weather Service, Soil Conservation Service and U.S. Geological Survey. Information from this network will be used for resource characterization and background data for predictive models. The objective of this monitoring is to characterize the existing condition of the resource and determine trends in precipitation. This information will also be used for project level analysis when needed.

PRECIPITATION	SNOW	CLIMATE
Brundage Res.	Brundage Res.	McCall
McCall	Secesh Summit	Yellow Pine
Secesh Summit	Bear Basin	Payette Lake
Riggins	Brundage Res.Pillow	Lake Fork Payette
Warren	Lakefork	Campbell's Ferry
	Les Bois	Riggins
	Placer Creek	Warren
	Secesh Summit	Little Salmon
	Secesh Summit Snotel	Riggins
	Squaw Meadow	

**Methods:** Monitoring will be conducted by other agencies for precipitation gages on or near the Forest. The information will be stored at the responsible agency. The Forest Hydrologist will review the reports and prepare a 5 year (or as needed) summary of the information available.

Program Soil and Water - Baseline Monitoring

Activity, Practice or Effect Hydrometeorological Monitoring - Streamflow

Activity Code FW121 MAR Number NA

Unit of Measure Acre feet of water

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Dependent on gage status and type

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Streamflow will be monitored in streams in which stream gages have been installed. This will occur at US Geological Survey (USGS) streamflow gages on or near the Forest and at a limited number of US Forest Service stream gages operated by research on the Forest.

The objective of monitoring streamflow is to provide baseline data to characterize the existing condition of the resource and determine trends in stream flow. This information will also be used for project level analysis where applicable.

#### **STREAMFLOW GAGING NETWORK**

##### Representation Stations

Lake Fork	13240000
West Branch Weiser	13251300
Weiser	13251500
Little Weiser	13261000
Wildhorse	13289960
Pine Creek, Oregon	13290190
SF Salmon River	13310700
EF South Fork Salmon R.	13311000
Johnson Creek	13313000
Little Salmon	13316500

##### Suitable Stations

Middle Fk. Weiser	13257000
East Brownlee Cr.	13289600
EF South Fork Salmon R.	13312000
Secesh	13313500
Mud	13315500

**Methods:** US Geological Survey (USGS) and Soil Conservation Service (SCS) will collect data from the USGS sites. The USFS Research Station will collect data from the USFS sites. They will use the standard USGS gaging techniques. All agencies will provide the data to the Forest Hydrologist to analyze. The Forest Hydrologist will review the reports and prepare a 5 year (or as needed) summary of the information available.

Program Soil and Water - Baseline Monitoring - Soil Productivity  
Activity, Practice or Effect Surface Erosion  
Activity Code FW121 MAR Number NA  
Unit of Measure Tons of Sediment  
Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA  
Is this item published in the Plan, Chapter V Yes  
Frequency Item is Monitored Annual  
Reporting Period 10 years  
Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Surface erosion in undisturbed area will be monitored to obtain baseline data. The objective of obtaining baseline data for surface erosion is to characterize the existing condition of the soil resource and determine trends in soil erosion.

Data obtained from this monitoring item will be used to validate the BOISED sediment model.

**Methods:** Monitoring will consist of erosion plots and/or transects on select landtypes in undisturbed areas. The data will be collected with either visual or surveyed evaluations of percent delivery of eroded material to stream channels. Currently plots have been established in the South Fork Salmon River. Additional plots on the forest will be listed when designated. (Also see Soil and Water - Validation Modeling - Sediment Yield Monitoring.)

Specific locations and techniques will be described when funding is obtained for this monitoring item.

This monitoring will be accomplished by Zone Hydrologists. The reports will be reviewed and compiled by the Forest Hydrologists and Soil Scientists.

Program Soil and Water - Baseline Monitoring - Soil Productivity

Activity, Practice or Effect Mass Erosion

Activity Code FW121 MAR Number NA

Unit of Measure Tons of Sediment

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10 years

Reporting Period 10 years

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Mass erosion will be monitored to obtain baseline data. The objective of obtaining baseline data for surface erosion is to characterize the existing condition of the soil resource and determine trends in soil erosion.

Data obtained from this monitoring item will be used to validate the BOISED sediment model.

**Methods:** Evaluation of event frequency in sample areas will be done by viewing aerial photographs of before and after activities with every aerial photograph update. Aerial photographs were last taken in 1987 and will be retaken in 1997. Occassionally, special flights are made and these photos will be reviewed as necessary. The Forest Soil Scientist will compare the photos and prepare a written report of any evidence of mass erosion.

Monitoring may also consist of visual and/or surveyed evaluation of percent delivery of eroded material to stream channels from mass failure. This monitoring will be done in conjunction with Soil and Water - Validation Monitoring - Sediment Yield . This monitoring will be performed and reported by Forest Soil Scientist.

Program Soil and Water - Baseline Monitoring

Activity, Practice or Effect Stream Channel Conditions

Activity Code FW121 MAR Number NA

Unit of Measure Particle size distribution; Cross-section surveys; photographs

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Instream monitoring will be conducted of physical parameters in cooperation with fisheries to determine whether Habitat Objectives for fisheries identified in Table IV-F1 are being met and the effects of management activities on fisheries. This monitoring will be done in conjunction with Fisheries - Habitat Objectives, Effects of Soil and Water Activities on Fish Habitat, Effects of Timber Management on Fish Habitat and Effects of Facilities on Fish Habitat.

**Methods:** Streambank and substrate evaluation techniques such as core samples, cobble embeddedness, photos, aerial photos, stream surveys, channel cross sections, channel stability ratings, sediment deposition measurements, sediment yield, hydraulic variables or other appropriate physical measurements will be employed.

Data will be collected and reported by the Zone Hydrologists and Fisheries Biologists. The Forest Hydrologist and Fisheries Biologist will review and compile the reports.

Techniques will vary depending on the monitoring objectives and conditions at each site. Since techniques for monitoring channel characteristics are not well established, several methods may be used and refined as time progresses. Site variables measured can and will change as technologies evolve. Monitoring items will be coordinated with Idaho Departments of Fish and Game and Health and Welfare, and adjacent Forests (Boise, Nez Perce, Salmon and Clearwater National Forests).

#### Nonanadromous

Twenty percent of adjudication sites on the Forest will be monitored every five years. Specific site location and information to be collected will be identified every five years by the Forest Hydrologist.

#### South Fork Salmon River

##### Stream Channel Cross Sections

Stream channel cross section sites in the South Fork Salmon River have been identified. These sites are: 1) Stolle Meadows (4 cross sections); 2) Dollar Creek (3 cross sections); 3) Poverty Campground (3 cross sections); 4) Poverty

Flat (3 cross sections); Glory Hole (3 cross sections); 5) Oxbow (3 cross sections); and 6) Krassel Gage (3 cross sections).

Cross sections and photographs will be taken every 4th year. The cross sections were established in 1987 and are due to be reinventoried in 1991, 1995 and 1999. The Krassel District Fisheries Biologist is responsible for collecting and analyzing the data for this monitoring item. The information will be reported to the South Fork Salmon River Steering Committee.

#### Particle Size Distribution

Thirty monitoring sites within the South Fork Salmon River Drainage will be monitored for particle size distribution. Particle size distribution will be evaluated with cobble embeddedness, free matrix, core sampling, ocular measurements, photographs, gradient, stream width, and large organic debris inventories.

The Krassel District Fisheries Biologist is responsible for collecting and analyzing the data for this monitoring item.

#### Other Anadromous Drainages

Seventeen monitoring sites within the New Meadows Ranger District in the French Creek, Lake Creek, Partridge Creek, Elkhorn Creek, Boulder Creek and Rapid River Watersheds. Particle size distribution will be evaluated with cobble embeddedness, free matrix, core sampling, ocular measurements, photographs, gradient, stream width, and large organic debris inventories.

The West Zone Fisheries Biologist is responsible for collecting and analyzing the data for this monitoring item.

Program Soil and Water - Baseline Monitoring

Activity, Practice or Effect Water Quality Trend

Activity Code FW121 MAR Number NA

Unit of Measure Variable

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Twice annually, summer and fall

Reporting Period Every fifth year

Responsible Official(s) RWSWM Staff and District Ranger

**Description:** Water quality will be monitored to obtain baseline data. The objective of obtaining baseline data for water quality is to characterize the existing condition of the water resource and determine trends in water quality.

Idaho Water Quality Standards include physical, chemical and biological water quality variables as well as narrative standards for non-point source activities. The State has adopted general water quality standards for hazardous materials, deleterious materials, radioactive materials, excess nutrients, oxygen demanding materials, and suspended sediment. These apply to all waters of the State. In addition to the general standards, numeric criteria for specific water use classifications is difficult and costly due to high variability. Forest management also has a low potential to affect many of these parameters. For these reasons, a limited sampling of these constituents is proposed for baseline monitoring. Selected constituents would be included as part of a water quality monitoring plan for projects.

There will be further evaluation and/or change in management direction if there is a failure to achieve Forestwide objectives for water quality management.

**Methods:** Twenty percent of adjudication sites will be monitored for water quality trend twice a year, summer and fall. Specific site location and information to be collected will be identified every five years by the Forest Hydrologist.

Monitoring will consist of standard methods for physical, chemical and biological water quality sampling and analysis. Particularly, macroinvertebrates, pH, conductivity and temperature will be monitored. Grab samples will be made and selected chemical parameters will be analyzed by State or contract labs. Monitoring will be coordinated with State of Idaho Department of Health and Welfare Division of Environment.

The following list identifies potential sites for water quality monitoring on the Forest.

Nonanadromous

North Fork Payette River at Forest boundary  
Mann Creek at Forest boundary



Other Anadromous  
Rapid River

South Fork Salmon River (SFSR) Streams

SFSR at USGS stream gauge  
SFSR at Knob Creek (wilderness boundary)  
Secesh River at Ponderosa C.G.  
East Fork SFSR above SFSR confluence  
East Fork SFSR below Sugar Creek

Middle Fork Salmon River Streams

Monumental Creek  
Marble Creek  
Big Creek  
Chamberlain Creek (Frank Church- River of No Return Wilderness)

This monitoring will also be done in conjunction with the following:

Soil and Water - Project Monitoring - Timber Management - Effectiveness of  
Erosion Control Measures and other SWCPs - Tributary Monitoring

Soil and Water - Project Monitoring - Timber Management - Impacts on  
Beneficial Uses - Mainstream Monitoring

Soil and Water - Project Monitoring - Minerals Management - Compliance with  
Idaho Water Quality Standards

Soil and Water - Project Monitoring - Facilities - Impacts to Soil and  
Water Resources

Soil and Water - Project Monitoring - Special Uses - Impacts to Soil and  
Water Resources

Fisheries - Management Indicator Species Abundance

Fisheries - Habitat Objectives

Fisheries - Effects of Timber Management on Fish Habitat

Fisheries - Effects of Special Uses on Fish Habitat

Fisheries - Effects of Range Management on Fish Habitat

The Forest Hydrologist and Fisheries Biologist is responsible for  
accomplishing, evaluating and reporting this monitoring item.

Program Soil and Water - Project Monitoring

Activity, Practice or Effect Riparian Areas

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Monitoring of management activities in riparian areas is an integral part of the monitoring program for all resource elements. Monitoring of management activities in riparian areas will be used for both implementation and effectiveness monitoring.

Results of the monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is nonattainment of Riparian Area Standards and Guidelines for more than 20 percent of all activities.

The following summary of riparian monitoring activities is provided to emphasize the importance of these areas to watershed resources. This monitoring will be conducted in conjunction with other monitoring.

1. Road Construction and Reconstruction - Review 90 percent of all crossings (approximately 5 per year) on fish bearing streams. (See Soil and Water - Project Monitoring - Facilities - Implementation of SWCPs and Impacts to Soil and Water Resources)
2. Range Allotments - Perform riparian area analyses on approximately 2 to 3 allotments per year. (See Soil and Water - Project Monitoring - Range Management - Implementation of SWCPs)
3. Timber Management - Forestwide, review 50 percent of projects occurring in riparian areas each year. (See Soil and Water - Project Monitoring - Timber Management - Implementation of SWCPs, Effectiveness of Erosion Control Measures and Other SWCPs, Impacts on Beneficial Uses - Tributary Monitoring and Impacts on Beneficial Uses - Mainstem Monitoring)
4. Mining Projects - Review 100 percent of all projects and activities occurring in riparian areas. (See Soil and Water - Project Implementation - Minerals Management - Implementation of SWCPs and Compliance with Idaho Water Quality Standards)
5. Small Hydropower - Review 100 percent of all projects and activities occurring in riparian areas. (See Soil and Water - Project Monitoring -

Special Uses - Implementation of SWCPs and Impacts to Soil and Water Resources)

6. ORV Use Patterns - Evaluate problem areas as necessary. (See Soil and Water - Project Monitoring - Recreation - Impacts to Soil and Water Resources))

7. Recreation Use and Related Special Uses - Review 2 to 3 outfitter and guide sites per year; review high mountain lake public use sites. (See Soil and Water - Project Monitoring - Recreation - Implementation of SWCPs and Impacts to Soil and Water Resources))

8. Road Maintenance - On-going surveillance of road maintenance practices. (See Soil and Water - Project Monitoring - Facilities - Impacts to Soil and Water Resources))

Results will be used to make adjustments in riparian management practices if needed. There will be further evaluation and/or change in management direction if on a program level there is non-attainment of Riparian Area Standards and Guidelines for more than 20 percent of activities.

**Methods:** Monitoring techniques will vary depending on the project and site specific issues. Applicable methods include written documentation, photo point sequences, vegetation transects, water quality sampling, channel cross sections or other appropriate measurements designed to evaluate riparian and stream channel condition.

The Forest Hydrologist, Fisheries Biologist and Soil Scientist will review and compile these reports. They will also assess the effects of the management activities on the riparian resources.

Program Soil and Water - Project Monitoring - Timber Management

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Timber, Engineering Staffs and District Rangers  
0

**Description:** Timber sale activities will be monitored to determine if mitigation and Soil and Water Conservation Practices (SWCPs) are being implemented as planned in the NEPA document. This monitoring will provide for the systematic documentation of the application of prescribed SWCPs. This monitoring will be done in conjunction with Soil and Water - Project Implementation - Facilities Implementation of SWCPs.

Results of the monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of timber sale activities.

**Methods:**

All Timber Sales

A checklist of Best Management Practices (BMPs) will be developed for all large timber sales and a sample of small sales. At a **minimum**, a BMP checklist review will be conducted on all timber sale activities by contract inspection personnel. This checklist will be reviewed by the Zone and Forest Hydrologists to evaluate compliance with BMPs.

Sample of Sales

Timber sale review will be done by the Zone Hydrologist on representative sales and by request of contract inspectors. Twenty-five percent of all land disturbing actions will receive annual interdisciplinary review, with a minimum of one such review per District. At least one Interdisciplinary (ID) Team review each year on the Forest will involve a full (all resource) ID Team with external participation.

Large Sales

Monitoring of large sales will consist of pre-sale, mid-sale and post-sale review with a minimum review of one year pre-sale and two years post-sale.

Small Sales

An average of six small sales will be monitored annually. Small sales to be monitored will be selected based on evaluation of the Preliminary

Project Proposal (PPP). Monitoring of small sales will consist of a presale, mid-sale and post sale review.

Monitoring will be conducted by an on-site evaluation of the extent and quality of implementation of management practices prescribed in project NEPA documents. The field review process involves written and photographic documentation of accomplishments both during and after sale completion. The SWCP checklist will be used during the review to assure that all mitigation measures are applied.

On-site monitoring will be conducted in the sale area based on the priority list below.

- Effects of transportation system development/management and harvest activities on known problem sites within the sale area (e.g. existing slumps, gullies, unstable channels, etc.)
- Transportation system development and management in riparian areas (specified and temporary)
- Timber harvest activities in riparian areas, including brush disposal
- Transportation system development and management in upland areas (specified and temporary)
- Timber harvest activities in upland areas

The emphasis will be placed on review of practices in riparian areas. Ninety percent of all constructed and reconstructed stream crossings on roads on fish bearing streams will be reviewed twice, during construction and following the first snowmelt season. A minimum of 50 percent of all timber management activities occurring in riparian areas each year will be reviewed.

This monitoring will be conducted by the Zone Hydrologists. The Forest Hydrologist will review and compile the reports.

Program Soil and Water - Project Monitoring - Timber Monitoring

Activity, Practice or Effect Effectiveness of Soil and Water Conservation Practices (SWCPs) and Erosion Control Measures - On-Site Monitoring

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Timber, Engineering Staffs and District Rangers

**Description:** Timber sale activities will be monitored to determine the effectiveness of mitigation measures and Soil and Water Conservation Practices (SWCPs) in reducing the impacts on the soil and water resources. The evaluation will be of the performance of representative mitigative practices as specified by the Memorandum of Understanding (MOU) with the Idaho State Department of Health and Welfare.

The focus will be on evaluation of the performance of prescribed practices in achieving management objectives in the project area and downstream locations.

Results of monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is a failure to meet erosion control objectives by more than 10 percent.

**Methods:** While monitoring for Implementation of SWCPs, the Zone Hydrologists make a qualitative assessment of the effectiveness of SWCPs for mitigating impacts on the soil and water resources. This information will be used in conjunction with quantitative information obtained from monitoring Impacts on Soil Productivity and Impacts of Beneficial Uses to assess the effectiveness of the mitigative measures.

The evaluation will be of a representative sample of projects. Emphasis on the monitoring will be placed on review of road construction mitigation and management practices in riparian areas.

This information will be compiled by the Forest Hydrologist and Soil Scientist to evaluate the effectiveness.

Program Soil and Water - Project Monitoring - Timber Management

Activity, Practice or Effect Effectiveness of Soil and Water Conservation Practices (SWCPs) and Erosion Control Measures - Tributary Monitoring

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Timber, Engineering Staffs and District Rangers

**Description:** Monitoring will occur in first and second order streams in selected timber sale areas to provide a linkage between qualitative on-site monitoring and main stream monitoring. Evaluation of associated riparian areas may also be conducted. The primary emphasis of this monitoring is to determine if timber sale activities related sediment storage is occurring in the headwater streams immediately adjacent to the project. This linkage will help to indicate whether the results of on-site reviews are substantiated when we look at the downstream environment. This provides an "early warning system", since changes in low order channels are measureable before downstream responses occur.

There will be further evaluation and/or change in management direction if on a program level there is non-attainment of Standards and Guidelines of more than 20 percent of activities.

**Methods:** Measurements will concentrate on sediment deposition behind obstructions, channel cross sections, and particle size distribution in sample reaches. Other techniques may be applied to assess tributary conditions depending on the site and associated issues (e.g. riparian area analysis, photo points, etc.).

Examples of the kinds of monitoring applicable are as follows: a) riparian area analysis, b) water temperature, c) channel surveys for sediment storage and condition, d) cobble embeddedness and related hydraulic information, e) photo points, f) sediment traps and g) streamflow and sediment discharge measurements. The intensity of effort in tributary monitoring will vary depending on the objectives, the site and associated issues.

This monitoring is coordinated with Fisheries - Effects of Timber Management on Fish Habitat.

**This activity will involve monitoring prior to implementation of the project.** Tributary monitoring will occur on all sales in the South Fork Salmon River drainage, approximately 50 percent of all large sales in the other anadromous and approximately 20 percent of all large sales in the nonanadromous portions of the Forest. A representative sample of small sales will also be evaluated.

This monitoring will be accomplished by the Zone Hydrologists and Fisheries Biologists. The Forest Hydrologist, Fisheries Biologist and Soil Scientist will review and compile the reports.



Program Soil and Water - Project Monitoring - Timber Management

Activity, Practice or Effect Effectiveness of Timber SWCPs - Impacts on Beneficial Uses - Mainstem Monitoring

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Timber, Engineering Staffs and District Rangers

**Description:** Monitoring in higher order channels will be done to evaluate the cumulative effect of management activities on the downstream environment. Evaluations of associated riparian areas may also be conducted. The primary emphasis of this monitoring is to evaluate project impacts on beneficial uses. Emphasis will be placed on physical measurements related to fish habitat conditions.

This monitoring is coordinated with Soil and Water - Baseline Monitoring - Stream Channel Condition and Soil and Water - Validation Monitoring - Sediment Yield Monitoring. Additionally, it is coordinated with Fisheries - Effects of Timber Management on Fish Habitat.

There will be further evaluation and/or change in management direction if on a program level there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of timber sale activities.

**Methods:** Monitoring techniques and intensity will vary depending on the site and associated issues. Methods could include core samples, cobble embeddedness, stream gaging, sediment sampling, photography, physical measurements of stream channel condition, etc. The most intense level of effort under this activity would include measurement of streamflow, sediment transport and fish habitat characteristics in control watersheds and watersheds affected by roading and harvesting.

**This activity will involve monitoring prior to implementation of the project.** Mainstream monitoring will occur on all sales in the South Fork Salmon River drainage, and approximately one large sale per year in each of the other anadromous and nonanadromous portions of the Forest.

This monitoring will be accomplished by the Zone Hydrologists and Fisheries Biologists. The Forest Hydrologist, Fisheries Biologist and Soil Scientist will review and compile the reports.

Program Soil and Water - Project Monitoring - Timber Management

Activity, Practice or Effect Effectiveness of Soil and Water Conservation Practices (SWCPs) - Impacts on Soil Productivity

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annually, 3 timber sales per year

Reporting Period Annual

Responsible Official(s) RWSWM, Timber, Engineering Staffs and District Rangers

**Description:** Timber sales will be monitored to determine if Soil and Water Conservation Practices (SWCPs) and site specific mitigation measures designed to reduce impacts on soil resources are being implemented as planned and to determine the effectiveness of these measures to meet resource management objectives.

Monitoring will be accomplished by two methods; field review and quantitative sampling. Quantitative sampling of representative sales will determine the areal extent and degree of soil compaction, puddling, displacement and erosion. Quantitative sampling will occur on three activity sites per year (or about 15 percent of ground disturbing activities) of a representative sample of timber projects.

Field review to check the compliance with SWCPs will be done on 25 percent of all timber activities annually by an interdisciplinary team, with a minimum of one such review per District. This monitoring will be accomplished in conjunction with Soil and Water Monitoring - Project Monitoring - Timber Management - Implementation of SWCPs.

The information obtained from this monitoring will provide an evaluation of the performance of prescribed practices in achieving management objectives in the project area and downstream locations. Feedback from monitoring the effectiveness of SWCPs will be used in changing management actions and prescribing mitigation measures.

There will be further evaluation and/or change in management direction if on a program level there is non-attainment of Soil Standards and Guidelines of more than 20 percent of timber activities.

**Methods:**

Field Review

All Timber Sales

A checklist of BMPs (Best Management Practices) will be developed for all large timber sales and a sample of small sales. At a **minimum**, a SWCP checklist review will be conducted on **all** activities by contract inspection

personnel. This checklist will be reviewed by the Zone Hydrologists and the Forest Soil Scientist to evaluate compliance with BMPs.

#### Sample of Sales

The field review process will involve written and photographic documentation of accomplishment of SWCPs both during and after the timber sale. Individual specialists will review the compliance of the identified measures on representative sales and by request of contract inspectors.

Field review will be done on 25 percent of all timber harvest activities, annually, with a minimum of one such review per District. The review will be an interdisciplinary review by Zone Hydrologists. At least one Interdisciplinary Team review each year on the Forest will involve a full Interdisciplinary Team with external participation.

#### Sampling

Quantitative sampling will occur on three activity sites per year (or about 15 percent of ground disturbing activities) of a representative sample of timber projects. The three sites will be distributed among the following: (a) all timber sales in the South Fork Salmon River Drainage, (b) one timber sale per year in the other-anadromous area of the Forest, (c) one timber sale per year in the nonanadromous area of the Forest and (d) one small or salvage sale per year.

Random transects and direct measurements of the soil bulk density and mass and surface erosion will be done in both disturbed and control areas in the sale area. The control areas will provide baseline information to assess the degree of impacts from the timber harvest activities.

Large sales will have two to three transects installed in disturbed areas and one transect in adjacent undisturbed areas. Small sales will have approximately half of the transects of that for a large sale. Samples will be taken once following completion of all land disturbing activities (road building, harvest, and slash disposal) and remeasured for two years afterward.

Sampling will be performed by the Zone Hydrologist. The reports will be reviewed and compiled by the Forest Soil Scientist.

Program Soil and Water - Project Monitoring - Minerals Management

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Engineering Staffs and District Rangers

**Description:** Mines will be monitored to determine if Soil and Water Conservation Practices (SWCPs) are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between mining and its effect on water quality, stream quality and fish habitat.

This monitoring will be coordinated with Fisheries - Effects of Mineral Activities on Fish Habitat.

Results from monitoring mines will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of mining activities.

**Methods:** Monitoring will be conducted by an on-site evaluation of the extent and quality of implementation of SWCPs and management practices prescribed in project NEPA documents. The field review process will involve written and photographic documentation of accomplishment.

The Zone Hydrologist will be responsible for performing this monitoring and preparing the annual report which will be reviewed and compiled by the Forest Hydrologist.

Large mines (Stibnite, Thunder Mountain and Hecla Mines) will be monitored four times during the operating season. All active operating small mines will be monitored for compliance with SWCPs and prescribed management practices. An average of 10 small mines are operating annually on the Forest. Special emphasis will be placed on review of practices and/or activities occurring in riparian areas.

Program Soil and Water - Project Monitoring - Minerals Management

Activity, Practice or Effect Compliance with Idaho Water Quality Standards

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored As designated by Project Monitoring Plan for Large  
Mines and as designated below for Small Mines

Reporting Period Annual

Responsible Official(s) RWSWM and Engineering Staff and District Rangers

**Description:** Mines will be monitored as required by the Idaho Department of Health and Welfare Division of the Environment to compliance with Idaho Water Quality Standards. Water quality standards are the legally allowed concentration of a consituent in natural waters or effluent discharges.

Results of implementation monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management practices if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of mining activities.

**Methods:**

Large Mines: Water quality sampling in cooperation with the State as directed in the Memorandum of Understanding between the Forest Service and the Idaho State Department of Health and Welfare Division of the Environment. A mutually agreeable study plan will be developed for each project of joint concern. Trend monitoring will normally be the responsibility of the Forest. The Forest will cooperate with the State in accomplishing Storm Event and Compliance monitoring. Most of the monitoring conducted on large mines will be done by the company or contractor, especially in the case of groundwater monitoring.

Small Mines: Monitoring of small mines will consist primarily of above/below sampling for compliance purposes by the Forest (primary parameter-turbidity).

All mines with current operating plans will be monitored annually. Additionally, inactive mines will be monitored on a priority basis which takes into account the probability of development and impacting soil and water resources. Each site will be monitored twice a year.

Monitoring will be conducted by the Zone Hydrologists who is responsible for site location, sample collection, sample transfer to lab and data compilation. The State of Idaho will do lab analysis of samples and enter data into the STORET database. The Forest Hydrologist will review and report the information.

Program Soil and Water - Project Monitoring - Range Management

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Range allotments will be monitored to determine if Soil and Water Conservation Practices (SWCPs) are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between the range use and its effect on water quality, stream quality and fish habitat.

This monitoring will be coordinated with Fisheries - Effects of Range Management on Fish Habitat.

Results from monitoring range allotments will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if on a program level there is non-attainment of Standards and Guidelines for more than 20 percent of activities.

**Methods:** Monitoring will be conducted by an on-site evaluation of the extent and quality of implementation of SWCPs and management practices prescribed in project NEPA documents. The field review process will involve written and photographic documentation of accomplishments.

Surveillance and photo documentation will be done on an average of approximately 2 to 3 allotments per year. Emphasis on monitoring will be placed on review of practices in riparian areas.

The Zone Hydrologist will be responsible for performing this monitoring and preparing the annual report to be compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Range Management

Activity, Practice or Effect Range Improvement Projects

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Rangeland improvement projects will be monitored to determine if projects are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between wildlife habitat improvements and their effect on water quality, stream quality and fish habitat. (See also Soil and Water - Project Monitoring - Wildlife Habitat Improvement Projects page XX.)

Results of implementation monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of range improvement projects.

**Methods:** Monitoring will be conducted by an on-site evaluation of the effect of rangeland improvement projects on soil and water resources. Monitoring will consist of photo points and/or soil transects or other appropriate techniques. The field review will involve written documentation of accomplishments.

The majority of monitoring efforts will be expended on vegetative manipulation (spraying, burning, scarification, seeding, etc.) projects with a concentration on the effects of vegetative manipulation on riparian areas. An average of three projects (560 acres) of vegetative manipulation will be monitored per year. Monitoring of water development (structural) projects would be required on only rare occasions.

This monitoring will be conducted by the Zone Hydrologists in cooperation with the Zone Wildlife Biologists with an annual report compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Facilities

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Engineering Staff and District Ranger

**Description:** The implementation of Soil and Water Conservation Practices (SWCPs) will be monitored to determine if plans and prescriptions were implemented as designed. The intent is to focus on cause and effect relationships between the facility and its effect on water quality, stream quality and fish habitat. This monitoring will be coordinated with Fisheries - Effects of Facilities on Fish Habitat.

Results of monitoring the implementation of Soil and Water Conservation Practices for facility development will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of facility development.

**Methods:** Monitoring of the implementation of Soil and Water Conservation Practices on facility projects will be accomplished by on-site evaluations of the extent and quality of implementation of management practices prescribed in project NEPA documents. The field review process involves written and photographic documentation of accomplishment. A checklist of SWCPs is being developed to be included in the NEPA document and will be used as a tool for monitoring.

Monitoring will occur on 90 percent of all constructed and reconstructed stream crossings on roads on fish bearing streams (both during construction and following the first snowmelt season). The emphasis will be on review of roads in drainages with anadromous fish.

The Zone Hydrologist will be conducting this monitoring. The report will be reviewed and compiled by the Forest Hydrologist.



Program Soil and Water - Project Monitoring - Facilities

Activity, Practice or Effect Impacts to Soil and Water Resources and Effectiveness of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSM and Engineering Staff and District Rangers

**Description:** Facilities (roads and trails) will receive surveillance to evaluate effectiveness with Soil and Water Conservation Practices (SWCPs). Facilities that have been in place prior to Forest Plan implementation will not be required to meet Standards and Guidelines, however, they will be surveyed to identify Soil and Water impacts and possible mitigation factors.

Annually there will be an evaluation of the effectiveness of access management and road maintenance programs in protecting beneficial uses.

The results of monitoring the impacts of facilities on Soil and Water Resources will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of facility projects.

**Methods:**

Effectiveness of SWCPs

The effectiveness of SWCPs on mitigating the impact to Soil and Water Resources will be monitored for all newly constructed facilities. This will be accomplished by field review which would consist of completing the SWCP checklist for facilities and photo documentation. This information will be used to provide a qualitative assessment of the effectiveness of the SWCP.

Quantitative monitoring techniques and intensity would vary widely depending on the site and associated issues. Detail would be provided in project specific monitoring plans. Information obtained from other monitoring in the affected drainage will also be incorporated to evaluate the effectiveness of SWCPs. As other monitoring is accomplished in a drainage, the proportion originating from facilities will be qualitatively determined.

Existing Projects Impacts on Soil and Water Resources

Field going personnel will complete a Road Situation Form when a maintenance need is identified in the field. The form will be given to the District Ranger. Districts identify road maintenance needs annually with input from the Zone Hydrologists and provide this information to the Engineering Staff. The

Engineering Staff incorporates this information to develop an annual maintenance plan based on management direction and protection objectives. Additionally, the Engineering Staff annually reports the miles of maintenance accomplishments and the miles in need of maintenance (see Facilities - Transportation Operations - Road Maintenance System Operation).

The SO Hydrologist will evaluate this information to determine the impacts of facilities on the soil and water resources. An annual report will be prepared of this assessment.

Program Soil and Water - Project Monitoring - Special Uses

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Lands, and Engineering Staff and District Ranger

**Description:** Special use activities (hydropower, outfitter and guides, irrigation ditches, etc.) will be monitored to determine if Soil and Water Conservation Practices (SWCPs) are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between mining and its effect on water quality, stream quality and fish habitat. This monitoring will occur in conjunction with Fisheries - Effects of Special Use Activities on Fish Habitat.

Results of implementation monitoring will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of Special Use activities.

**Methods:** Monitoring will be conducted by on-site evaluation of the extent and quality of implementation of SWCPs and management practices prescribed in project NEPA documents. The field review process involves written and photographic documentation of accomplishment of the SWCPs.

Currently, two active hydropower projects will be monitored annually. There are also four nonactive hydropower projects on the Forest. Hydropower proponents will perform monitoring associated with development projects. Emphasis will be placed on review of special use activities in riparian areas. All new hydropower developments that occur in riparian areas will be monitored.

Two to three outfitter and guide sites will be reviewed per year. The emphasis will be on review of high mountain lake sites.

The Zone Hydrologists will be responsible for performing this monitoring and preparing the annual report. The Forest Hydrologist will review and compile the reports.

Program Soil and Water - Project Monitoring - Special Uses

Activity, Practice or Effect Impacts to Soil and Water Resources and Effectiveness of SWCPs

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Engineering Staff and District Rangers

**Description:** Special use activities (hydropower, outfitter and guides, irrigation ditches, etc.) will be monitored to determine the effect of the project on water quality, stream quality and fish habitat. Projects vary from small hydropower to irrigation ditches.

Results of monitoring special use projects will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of special use activities.

**Methods:** Monitoring will consist of field reviews, photo points, or other appropriate physical measurements on a site specific basis as determined for each project. Monitoring may be performed by proponents on some projects. The emphasis will be on review of practices and/or projects occurring in riparian areas.

All diversions of water will be monitored to determine whether or not instream flow requirements are met.

The Zone Hydrologist will be responsible for performing this monitoring and preparing the annual report. The Forest Hydrologist will review and compile the reports.

Program Soil and Water - Project Monitoring - Recreation

Activity, Practice or Effect Implementation and Effectiveness of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Recreation Staff and District Rangers

**Description:** Recreation projects will be monitored to determine if Soil and Water Conservation Practices are being implemented as planned and to determine the effectiveness of these measure at meeting resource management objectives. The intent is to focus on cause and effect relationships between recreation projects and their effect on water quality, stream quality and fish habitat.

Results of project level monitoring will be used to refine practices and/or projects both in the short and long term. Significant variations in implementation and/or predicted results will be used to modify practices or outputs in the Forest Plan. There will be further evaluation and/or change in management practice if on a program level there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of recreation projects.

**Methods:** Monitoring will be conducted by an on-site evaluation of the extent and quality of implementation of SWCPs and management practices prescribed in project NEPA documents. The field review process will involve written and photographic documentation of accomplishment.

One trail under reconstruction and one recreation site being constructed or reconstructed will be monitored per year. Emphasis will be placed on review of activities in riparian areas.

The effectiveness of SWCPs in protecting soil and water resources for recreation projects will be accomplished in conjunction with other monitoring occurring in the affected drainage. As monitoring is accomplished in a drainage, the proportion originating from recreation projects will be qualitatively determined.

The Zone Hydrologist will be responsible for performing this monitoring. The reports will be reviewed and compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Recreation

Activity, Practice or Effect Impacts to Soil and Water Resources

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM and Recreation Staff and District Rangers

**Description:** Existing recreation facilities, trails, special use permits, etc. will be monitored by request or simultaneous with other monitoring activities to identify problem areas.

Results of implementation monitoring will be used to refine practices and/or projects both in the short and long term. Mitigation measures may be applied to lessen the impact in problem areas.

There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of existing recreational activities.

**Methods:** Monitoring of existing recreational activities will be accomplished with field review of problem areas (projects, facilities, trails, etc.) by request or simultaneous with other monitoring activities. Emphasis on monitoring will be to review of activities in riparian areas. This monitoring will include evaluation of Off Road Vehicle (ORV) and Outfitter and Guide impacts. Two to three Outfitter and Guide sites will be reviewed per year for compliance with Standards and Guidelines and/or project direction (including high mountain lake sites).

The field review process will involve written and photographic documentation of problem areas. The Zone Hydrologist will be responsible for performing this monitoring and preparing the annual report to be compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Wildlife and Fish Habitat Improvement Projects

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes, what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Wildlife and fish habitat improvement project will be monitored to determine if mitigation and SWCPs are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between mining and its effect on whater quality, stream quality and fish habitat.

There will be further evaluation and/or change in management direction if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of fish and wildlife improvement projects.

**Methods:** Monitoring will be conducted by an on-site evaluation of the extent and quality of implementation of management practices prescribed in project NEPA documents. The field review process involves written and photographic documentation of accomplishment.

All projects will be reviewed with an emphasis on review of practices in riparian areas. Annually, an average of five wildlife habitat improvement projects (vegetative manipulation), nine structural fish habitat improvements and six nonstructural fish habitat improvements are accomplished.

This monitoring will be conducted by the Zone Hydrologists. The Forest Hydrologist will review and compile the reports.

Program Soil and Water - Project Monitoring - Wildlife Habitat Improvements

Activity, Practice or Effect Impacts of Wildlife Habitat Improvement Projects on Soil and Water Resources

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Wildlife improvement projects, particularly vegetative manipulation, will be monitored to determine the effects of the project on soil and water resources. The intent is to focus on cause and effect relationships between wildlife habitat improvements and their effect on water quality, stream quality and fish habitat. This monitoring will occur in conjunction with Soil and Water - Project Monitoring - Rangeland Improvements.

Results of implementation monitoring will be used to refine practices and/or projects both in the short and long term. There will further evaluation and/or change in mangement direction if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of wildlife improvement projects.

**Methods:** Monitoring will be conducted by an on-site evaluation of the effect of wildlife habitat improvement projects on soil and water resources. Monitoring will consist of photo points and/or soil transects. The field review will involve written documentation of accomplishments.

The majority of monitoring efforts will be expended on vegetative manipulation projects with a concentration on the effects of vegetative manipulation on riparian areas. An average of five projects (or 1210 acres) of vegetation manipulation will be monitored per year. Only rarely would water development structures require monitoring.

This monitoring will be conducted by the Zone Hydrologists in cooperation with the Zone Wildlife Biologists with an annual report compiled by the Forest Hydrologist.



Program Soil and Water - Project Monitoring - Fish Habitat Improvements

Activity, Practice or Effect Impacts of Fish Habitat Improvement Projects on Soil and Water Resources

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Fish habitat improvement projects will be monitored to determine if projects are being implemented as planned and to determine the effectiveness of these measures at meeting resource management objectives. The intent is to focus on cause and effect relationships between the fish habitat improvement project and its effect on water quality, stream quality and fish habitat.

Results of monitoring fish habitat improvements will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of fish habitat improvement projects.

**Methods:** Monitoring will be conducted by an on-site evaluation of the effects of fish habitat improvements on soil and water resource. Monitoring will consist of photo points, channel cross sections or other appropriate physical measurements. The field review will involve written documentation of accomplishments. An average of 4 resident fish structures, 5 anadromous fish structures, 2 nonstructural resident fish projects and 4 nonstructural anadromous fish projects will be monitored annually.

This monitoring will be conducted by the Zone Hydrologists in cooperation with the Zone Fisheries Biologists with an annual report compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Protection

Activity, Practice or Effect Implementation of Soil and Water  
Conservation Practices (SWCPs) for Prescribed Burns

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Timber and Fire Staff and District Rangers

**Description:** The implementation of Soil and Water Conservation Practices (SWCPs) for prescribed fire (fuel reduction) activities will be monitored to determine if plans and prescriptions were implemented as designed. The intent is to focus on cause and effect relationships between prescribed burns and its effect on water quality, stream quality and fish habitat. This monitoring will be done in conjunction with Fisheries - Effects of Fire on Fish Habitat, Soil and Water - Wildlife Habitat Improvements - Impacts of Wildlife Habitat Improvements on Soil and Water Resources and Soil and Water - Range Improvements - Impacts of Range Improvements on Soil and Water Resources.

Results of monitoring the implementation of SWCPs for fires will be used to refine practices and/or projects both in the short and long term. There will be further evaluation and/or change in management direction if on a program level there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of fuel reduction activities.

**Methods:** Monitoring of the implementation of SWCPs for fire activities will be accomplished by on-site evaluation of the extent and quality of implementation of management practices prescribed in project NEPA documents. The field review process involves written and photographic documentation of accomplishments.

Fuel reduction activities will require monitoring of riparian areas and an evaluation of burn impacts. This monitoring will be accomplished as part of the post timber sale and vegetative manipulation monitoring.

The Zone Hydrologist will be conducting this monitoring. The report will be reviewed and compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Protection

Activity, Practice or Effect Impacts of Prescribed Burns on Soil and Water Resources and Effectiveness of Soil and Water Conservation Practices (SWCPs)

Activity Code RZ9 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Ranger

**Description:** The effectiveness of SWCPs to mitigate impacts on soil and water resources will be monitored for prescribed burns. This monitoring will occur in conjunction with monitoring conducted for Fisheries - Effects of Fire on Fish Habitat, Soil and Water - Wildlife Habitat Improvements - Impacts of Wildlife Habitat Improvements on Soil and Water Resources and Soil and Water - Range Improvements - Impacts of Range Improvements with Soil and Water Resources.

Results of implementation and effectiveness monitoring will be used to refine practices and/or projects both in the short and long term. There will further evaluation and/or change in management practices if there is nonattainment of Soil and Water Standards and Guidelines for more than 20 percent of prescribed burning activities.

**Methods:** Monitoring will consist of photo points and/or soil transects on a representative sample of projects. The emphasis will be placed on review of activities in riparian areas.

Other pollution source and transport monitoring in the affected drainage will be used to assess the impacts on the soil and water resources from prescribed burning. As pollution source and transport monitoring is accomplished in a drainage, the proportion originating from prescribed burn activities will be qualitatively determined.

The Zone Hydrologist will be responsible for performing this monitoring. The reports will be reviewed and compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Protection  
Activity, Practice or Effect Impacts of Wildfire on Soil and Water Resources  
Activity Code RZ9 MAR Number NA  
Unit of Measure NA  
Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA  
Is this item published in the Plan, Chapter V Yes  
Frequency Item is Monitored Annual  
Reporting Period Annual  
Responsible Official(s) RWSWM Staff and District Ranger

**Description:** Wildfires will receive surveillance to evaluate the compliance with Standards and Guidelines. The intent is to focus on cause and effect relationships between wildfire and suppression activities and its effect on water quality, stream quality and fish habitat. This monitoring will be conducted in conjunction with Fisheries - Effects of Fire on Fish Habitat.

Results of monitoring the impacts on soil and water resources will be used to refine practices both in the short and long term. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of wildfire activities.

**Methods:** Monitoring to evaluate compliance with Standards and Guidelines will consist of field reviews and photo documentation. Evaluation of emergency fire rehabilitation activities and results using appropriate methods that will be determined on a site specific case. The emphasis will be placed on review of activities in riparian areas.

Other pollution source and transport monitoring in the affected drainage will be used to assess the impacts on the soil and water resources from prescribed burning. As pollution source and transport monitoring is accomplished in a drainage, the proportion originating from prescribed burn activities will be qualitatively determined.

The Zone Hydrologist will be conducting this monitoring. The report will be reviewed and compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Resource Improvements  
Activity, Practice or Effect Accomplishment of Improvement Projects  
Activity Code FW2 MAR Number 38.1 and 38.2  
Unit of Measure Acres and Structures  
Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA  
Is this item published in the Plan, Chapter V Yes  
Frequency Item is Monitored Annual  
Reporting Period Annual  
Responsible Official(s) Forest Planner

**Description:** The desired fish habitat objectives listed in the Forest Plan (pages 101 and 102) are not being met in some watersheds due to past disturbances. Soil and water improvement projects are one means of upgrading watershed conditions to help meet management objectives. Monitoring will establish whether improvement projects necessary to meet Standard and Guidelines and identified in the Forest Plan Activities Schedule are being implemented. This monitoring is tied to Fisheries - Direct Investment.

Results will be evaluated and used to make adjustments in the improvement program or other resource outputs if necessary. There will be further evaluation and/or change in management direction if there is a deviation of greater than 10 percent from programmed outputs.

**Methods:** Annual budget and Management Attainment Reports will be used to determine if identified soil and water improvement needs are being accomplished.

This monitoring will be done by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Resource Improvements

Activity, Practice or Effect Implementation of Soil and Water Conservation Practices (SWCPs)

Activity Code FW2 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Soil and water improvement projects are one means of upgrading watershed conditions to help meet management objectives. Monitoring under this activity is intended to establish whether Soil and Water Conservation Practices (SWCPs) and management practices prescribed in project NEPA documents are being implemented on soil and water improvement projects.

Monitoring will be done on all soil and water improvement projects and should be accomplished in conjunction with Soil and Water - Resource Improvements - Effectiveness of Projects and Project Maintenance.

Results will be evaluated and used to make adjustments in the improvement program or other resources if necessary. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines for more than 20 percent of soil and water improvement projects.

**Methods:** Monitoring will be done with on-site evaluation of the extent and quality of implementation of SWCPs and management practices prescribed in project NEPA documents. The field review process will involve written and photographic documentation of accomplishments.

Monitoring will occur on approximately 942 acres of improvement projects per year (an average of 8 new projects per year). For the typical project, monitoring will involve 3 years (1 year during and 2 years post-activity). Emphasis will be placed on review of activities in riparian areas.

Zone Hydrologists will be responsible for accomplishing this monitoring. The reports will be reviewed and compiled by the Forest Hydrologist.

Program Soil and Water - Project Monitoring - Resource Improvements  
Activity, Practice or Effect Effectiveness of Projects and Project Maintenance  
Activity Code FW2 MAR Number NA  
Unit of Measure NA  
Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA  
Is this item published in the Plan, Chapter V Yes  
Frequency Item is Monitored Annual  
Reporting Period Annual  
Responsible Official(s) RWSWM Staff and District Ranger

**Description:** Soil and water improvement projects are one means of upgrading watershed conditions to help meet management objectives. The effectiveness of these projects will be monitored to determine if they are contributing to management objectives. Monitoring of the effectiveness of the project and project maintenance will be performed on all soil and water improvement projects and should be accomplished in conjunction with Soil and Water - Project Monitoring - Resource Improvements - Implementation of Soil and Water Conservation Practices.

Results will be evaluated and used to make adjustments in the improvement program or other resource outputs if necessary. There will be further evaluation and/or change in management direction if there is non-attainment of Soil and Water Standards and Guidelines on more than 20 percent of soil and water improvement projects.

**Methods:** Monitoring will primarily involve on-site qualitative assessment of project success. Field evaluation with a minimum of photo points will be used on every project in order to document that project objectives are met. Some projects may require vegetative trend or other quantitative methods of evaluation.

This monitoring will be conducted by the Zone Hydrologists. The Forest Hydrologist will review and compile the reports.

Program Soil and Water - Validation Monitoring

Activity, Practice or Effect Sediment Yield Modeling

Activity Code FW121 MAR Number NA

Unit of Measure Sediment Yield in Tons per Mile

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Sediment yields will be monitored to validate the Forest's Sediment Yield Model. The objective of this monitoring is to determine if standards, criteria, and guidelines are properly defined and if predictive relationships are valid to meet Forest Plan goals and objectives. Monitoring of sediment yields is done in conjunction with Soil and Water - Baseline Monitoring - Soil Productivity - Surface Erosion and Mass Erosion.

The results of this monitoring will be used to refine the Forest's Sediment Yield Model as necessary based upon the findings.

**Methods:** Monitoring will consist of a comparison of predicted versus measured sediment yields from paired watersheds (control and disturbed). Two sets of pair watersheds will be established on the Forest in different geologies. Collection of annual sediment yield data will involve stream discharge measurement and sampling of both suspended and bedload sediment.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The monitoring program will be designed in coordination with Regional monitoring guidelines and other appropriate direction. The Forest will also cooperate with the Boise National Forest in evaluation and refinement of the BOISED sediment model.

The Forest Hydrologist and Soil Scientist are responsible for accomplishing, evaluating and reporting this monitoring item.



Program Soil and Water - Validation Monitoring

Activity, Practice or Effect Sediment Yield and Fish Habitat Relationships

Activity Code FW121 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) RWSWM Staff

**Description:** The relationship between sediment and fish habitat will be evaluated by utilizing monitoring information collected for other monitoring items. The objective of this monitoring is to determine if standards, criteria, and guidelines are properly defined and if predictive relationships are valid to meet Forest Plan goals and objectives.

The results of this monitoring will be used to refine the Forest's understanding of the relationships of sediment and fish habitat as necessary based upon findings.

**Methods:** Monitoring will consist of continued evaluation of quantitative relationships between modeled sediment yield and fish habitat parameters (e.g. cobble embeddedness). Information collected in the following will be used for the evaluation:

Soil and Water - Baseline Monitoring - Stream Channel Conditions  
Soil and Water - Project Monitoring - Timber Management - Effectiveness of Erosion Control Measures and Other SWCPs - Tributary Monitoring  
Soil and Water - Project Monitoring - Timber Management - Impacts on Beneficial Uses - Mainstem Monitoring  
Fisheries - Management Indicator Species Abundance  
Fisheries - Habitat Objectives  
Fisheries - Effects of Timber Management on Fish Habitat and Implementation of SWCPs  
Fisheries - Effects of Special Uses on Fish Habitat and Implementation of SWCPs  
Fisheries - Effects of Range Management on Fish Habitat and Implementation of SWCPs

The Forest Hydrologist and Fish Biologist are responsible for accomplishing, evaluating and reporting this monitoring item.

Program Soil and Water - Validation Monitoring

Activity, Practice or Effect Soil Productivity Standards

Activity Code FW121 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Soil productivity will be monitored to validate the Forest's Standards and Guidelines dealing with soil productivity. The objective of this monitoring is to determine if standards, criteria, and guidelines are properly defined and if predictive relationships are valid to meet Forest Plan goals and objectives.

The results of this monitoring will be used to refine Standards and Guidelines dealing with soil productivity as necessary based upon findings.

**Methods:** Monitoring will consist of an evaluation of soil productivity standards and guidelines. Locations and specific techniques will be described when funding is obtained for this monitoring item. The monitoring program will be designed and coordinated with the Boise NF.

The Forest Soil Scientist is responsible for accomplishing and reporting this monitoring.

Program Soil and Water - Valildation Monitoring

Activity, Practice or Effect Instream Flow Quantification Techniques

Activity Code FW121 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Instream flow on the Forest will be monitored to validate the Forest's instream flow quantification techniques. The objectives of this monitoring is to determine if standards, criteria, and guidelines are properly defined and if predictive relationships are valid to meet Forest Plan goals and objectives.

There will be further evaluation and/or change in management direction if monitoring finds significant difference of actual instream flow from predictions.

**Methods:** Monitoring will consist of streamflow and channel geometry measurements on representative streams.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The Forest Hydrologist is responsible for accomplishing and reporting this monitoring.

Program Soil and Water - Validation Monitoring

Activity, Practice or Effect Water Yield Modeling

Activity Code FW121 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 10 years

Responsible Official(s) RWSWM Staff

**Description:** Water yield on the Forest will be monitored to validate the Forest's water yield modeling procedure. The objective of this monitoring is to determine if standards, criteria, and guidelines are properly defined and if predictive relationships are valid to meet Forest Plan goals and objectives.

The results of this monitoring will be used to refine the water yield model.

**Methods:** Monitoring will consist of comparison of channel condition and other data with predicted project impacts in representative watersheds.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The Forest Hydrologist is responsible for accomplishing and reporting this monitoring.

**RANGE**

Program Range

Activity, Practice or Effect Annual Operating Plans

Activity Code DN122 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes (utilization)

Frequency Item is Monitored Annual For all Allotments Receiving Use

Reporting Period Annual

Responsible Official(s) RWSM Staff and District Rangers

**Description:** Annual Operating Plans provide the basis for grazing an allotment in any year. These plans state numbers and season of use, improvement maintenance responsibilities, proper use, and any special conditions for the allotment.

The Annual Operating Plan may restate parts of the term grazing permit or allotment management plan and are a binding part of the grazing permit. Monitoring annual operating plans ensures the permittees abide by the terms and conditions of their permits.

Items to be monitored are season of use, rotation of pastures (where applicable), utilization, maintenance of improvements within stated time frames, and any other conditions listed.

There will be further evaluation and/or change in management direction if the terms of a permit or the annual operating plan are not being met.

**Methods:** Most conditions of the annual operating plan can be monitored by observation throughout the season. Utilization requires the use of statistically sound method. The recommended methods for forage are the utilization guide, the grazed class method, key forage plant method, or height/weight curves developed by the forest for the local species. For shrub species the key forage plant or Cole browse method are recommended. Ocular estimation may be used in non-key areas. See FSH 2209.21 and BLM Technical Reference TR 4400-3 (Utilization Studies) for descriptions of the various methods.

Transects will be established in key riparian and upland areas. Photo points will be established at the transects as well as other areas in the allotment. Transects will be established along previous Parker 3-step transects where appropriate. The Parker 3-step photo plots will continue to be photographed. The data will be reported as percent weight removed, by transect, with a narrative for each allotment done also.

Under minplan funding levels, all allotments receiving use will be inspected at least once during the grazing season. This inspection should include a notation of all elements of the annual operating plan with at least an ocular

estimation of utilization. Small on/off allotments with no known problems need not be inspected. If funding levels are below minplan, only those allotments rated as a priority for the District (from the 5-year action plan) will be monitored. If funding permits, each allotment receiving use should be monitored throughout the season.

The District Range Conservationists will report this information to the Forest RWSWM Staff. The RWSWM Staff will review the information and compile it for the annual report.

Program Range

Activity, Practice or Effect Ecological Status and Trend - Riparian

Activity Code DN111-2 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10% measured annually; 90% estimated annually

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Ecological status is frequently referred to as ecological condition or range condition. Ecological status is use independent and refers to the relationship of the present plant community to the potential plant community that would be present in the absence of abnormal (man caused) disturbances. Ecological status is separated into one of four successional stages based on the degree of similarity of present vegetation to the Potential Natural Community on a given site. These stages are Potential Natural Community, Late Seral, Mid Seral, and Early Seral for plant communities that are 76-100%, 51-75%, 26-50%, and 0-25% respectively similar to the Potential Natural Community.

Trend is simply the direction of change of vegetation. Trend is most frequently used to indicate whether rangeland conditions are moving towards or away from resource objectives or the Potential Natural Community (or a desired seral stage). Common indicators of trend include change in plant cover, composition, diversity, production, frequency of occurrence, and density of plants. Vigor, form class (primarily on shrubs), reproduction and recruitment of new plants are also important indicators of trend. Non-vegetative indicators include soil stability and erosion and litter cover. Instead of monitoring all of these variables, one or several are generally chosen as indicators of trend and monitored over time.

Ecological status and trend are monitored because they clearly reflect the quality of management and the status of rangelands. When trend is not improving, management practices need to be altered in an attempt to reach the desired future condition.

There will be further evaluation and/or change in management direction if the ecological status is declining.

**Methods:** An interdisciplinary team will prepare specific resource objectives for all range allotments. These objectives will describe the desired future condition to a level that is easily measurable. The desired future condition will be described using the ecological condition classes and resource value ratings described in FSH 2209.21.



The method of measurement used will be determined by the objectives for the area. See FSH 2209.21 for a description of various methods. Another useful reference is the BLM Technical Reference 4400-4 (Trend Studies).

Transects will be established in key riparian areas. Photo points should also be established at the transects as well as other areas of the allotment. Where appropriate, transects will be established along previous Parker 3-step transects. Parker 3-step photo plots will continued to be photographed. The data will be correlated with the Parker 3-step method.

Each allotment will then be rated in one of the following categories:

- Riparian acres meeting forest plan management objectives
- Riparian acres moving toward forest plan management objectives
- Riparian acres neither meeting nor moving toward forest plan management objectives

See the description of these categories in PNW General Technical Report --- "New Criteria for Measuring Range Management Activities."

District Range Conservationists will report this information to the Forest RWSWM Staff. The RWSWM Staff will review and compile the information for the annual report.

Program Range

Activity, Practice or Effect Ecological Status and Trend - Upland

Activity Code DN111-2 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10% measured annually; 90% estimated annually

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Ecological status is frequently referred to as ecological condition or range condition. Ecological status is use independent and refers to the relationship of the present plant community to the potential plant community that would be present in the absence of abnormal (man caused) disturbances. Ecological status is separated into one of four successional stages based on the degree of similarity of present vegetation to the potential natural community (PNC) on a given site. These stages are Potential Natural Community, Late Seral, Mid Seral, and Early Seral for plant communities that are 76-100%, 51-75%, 26-50%, and 0-25% similar to Potential Natural Community.

Trend is simply the direction of change of rangeland vegetation. Trend is most frequently used to indicate whether rangeland conditions are moving towards or away from resource objectives or the Potential Natural Community (or a desired seral stage). Common indicators of trend include change in plant cover, composition, diversity, production, frequency of occurrence, and density of plants. Vigor, form class (primarily on shrubs), reproduction and recruitment of new plants are also important indicators of trend. Non-vegetative indicators include soil stability/erosion and litter cover. Instead of monitoring all of these variables, one or several are generally chosen as indicators of trend and monitored over time.

Ecological status and trend are monitored because they clearly reflect the quality of management and the status of rangelands. When trend is not improving, management practices need to be altered in an attempt to reach the desired future condition.

There will be further evaluation and/or change in management direction if the ecological status is declining.

**Methods:** An interdisciplinary team will prepare specific resource objectives for all range allotments. These objectives will describe the desired future condition to a level that is easily measurable. The desired future condition will be described using the ecological condition classes and resource value ratings described in FSH 2209.21.

The method of measurement used will be determined by the objectives for the area. See FSH 2209.21 for a description of various methods. Another useful reference is the BLM Technical Reference 4400-4 (Trend Studies).

Transects should be established in key upland areas (professional judgement of range cons). Photo points should also be established at the transects as well as other areas of the allotment. Where appropriate, establish transects along old Parker 3-step transects. Continue to photograph Parker 3-step photo plots. We will attempt to correlate the data collected with the Parker 3-step method to that collected with the new methods. Permittees should be involved in establishment and reading of transects when interested.

Each allotment will then be rated in one of the following categories:

- Upland acres meeting forest plan management objectives
- Upland acres moving toward forest plan management objectives
- Upland acres neither meeting nor moving toward forest plan management objectives

See the description of the categories in PNW General Technical Report --- "New Criteria for Measuring Range Management Activities."

District Range Conservationists will report this information to the Forest RWSWM Staff. The RWSWM Staff will review and compile the information for the annual report.

Program Range

Activity, Practice or Effect Carrying Capacity

Activity Code DN111-1 MAR Number NA

Unit of Measure Animal Unit Months (AUMs)

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system RAMIS

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored 10% of allotments

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** The carrying capacity of an area is a description of the number of grazing animals that area can sustain. It is defined in animal months (1 mature, dry 1000 lb cow for one month; or the equivalent). See FSH 2209.15 Section 12.29 (9/89) for the equivalencies.

Carrying capacity is monitored to ensure proper use of the vegetation. It takes into account the amount of biomass needed by a plant for regeneration and the amount of forage needed by wildlife for survival, soil stability, and watershed needs.

There will be further evaluation and/or change in management direction if carrying capacities are not updated according to the 5-year plan.

**Methods:** The original range analysis was conducted in the 1960's and 1970's. Some were updated in the early 1980's. Since the last update, emphasis has been placed on riparian areas and other sensitive areas. Most of these concerns were not taken into account when carrying capacity was last updated. For this reason, previous carrying capacities should be taken as a guideline and not as necessarily reflecting the current carrying capacity.

District Range Conservationists will update the existing carrying capacity using the data collected during utilization studies. Since the updated carrying capacity may be lower than the existing permitted use, data collected with sampling methods other than ocular estimation will be used. This monitoring will be done in conjunction with Range - Annual Operating Plans.

Proper use will be determined for each key species on an allotment taking into account all of the known concerns. These may include, but are not limited to, wildlife forage needs, riparian values, soil stability, watershed values, soil classification, and plant biomass needed for regeneration.

See FSH 2209.21 for a description of how to determine carrying capacity.

District Range Conservationists will annually report the revised carrying capacities. The RWSWM Staff will review and compile the information in an annual report.

Program Range

Activity, Practice or Effect Noxious Weed Control

Activity Code DN24 MAR Number 9.0

Unit of Measure NA

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system RAMIS - Treatment

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Continuous

Reporting Period Acres treated-annual; acres infested-every 5 years

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Noxious weeds generally will possess one or more of the following characteristics: aggressive and difficult to manage, parasitic and/or a carrier or host of serious insects or disease.

Reporting total acres each fiscal year will provide tracking of target accomplishments and data for determining unit costs. A 5-year report on the infestation levels by species will provide information needed to document the trends in noxious weed infestations, their economic impact, and long-term assessment of treatment needs. The loss in forage production, negative impacts on wildlife habitat, rehabilitation of disturbed areas, change in land values, decreases in water quality, and loss in recreation values are several of the negative impacts that noxious weeds have on accomplishing our land management objectives.

There will be further evaluation and/or change in management direction if there is an increase of noxious weeds.

**Methods:** Noxious weed infestations are to be mapped during regular allotment inspections. The mapping is by species and infestation level. These levels are:

- low = less than 5% canopy cover
- moderate = 5-25% canopy cover
- high = over 25% canopy cover.

See the description of this in PNW General Technical Report --- "New Criteria for Measuring Range Management Activities."

Areas treated (initial treatment), retreated, and in need of treatment will be mapped by the District Range Conservationists. The Range Conservationists will report this information to the Forest RWSWM Staff who will review it and prepare an annual report.

Program Range

Activity, Practice or Effect Allotment Management Planning

Activity Code DN112 MAR Number NA

Unit of Measure Number of Completed Plans

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored 100% of allotments

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** This item reflects the adequacy of allotment planning and management. Revision of Allotment Management Plans (AMPs) will be monitored.

There will be further evaluation and/or change in management direction if there is a deviation from the 5-year plan to update the Allotment Management Plans.

**Methods:** Annually, District Range Conservationists will submit the information to the Forest RWSWM Staff. The Forest RWSWM Staff will review and compile the information in an annual report.

Allotments are classified as 1) managed to fully meet Forest Plan and AMP objectives; 2) with approved AMP written to fully meet Forest Plan objectives but not implemented or appropriate monitoring not taken place; or 3) not managed to fully meet Forest Plan and AMP objectives.

See the description of these categories in PNW General Technical Report ---  
"New Criteria for Measuring Range Management Activities."

Program Range

Activity, Practice or Effect Regeneration Protection and Range Use

Activity Code DN111 MAR Number NA

Unit of Measure Trees per acre

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes (under Timber Coordination)

Frequency Item is Monitored Annual

Reporting Period 3 years

Responsible Official(s) Timber and Range Staff

**Description:** The protection of timber regeneration from livestock damage will be monitored annually.

There will be further evaluation and/or change in management direction if there are 5 percent or more of timber planted acres destroyed due to the lack of protection or abuse of protection measures.

**Methods:** Monitoring will consist of information collected under Timber - Adequate Restocking of Lands within 5 years of Final Harvest. This information is the responsibility of the Timber Staff but will be reviewed for damage by livestock by the Forest RWSWM Staff.

Program Range

Activity, Practice or Effect Livestock Grazed

Activity Code DN12 MAR Number \_\_\_\_\_

Unit of Measure Number of Livestock and Animal Unit Months (AUMs)

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system RAMIS

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored 100% of actual use

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Total livestock grazed by kind (cattle, sheep, horses, and goats) and the total Animal Unit Months (AUMs) grazed annually are monitored. An AUM is the amount of feed or forage required by one mature, dry 1000 lb. cow (or equivalent) for one month. This is approximately 780 lbs. of dry forage matter, based on an average consumption of 26 lbs per day. See FSH 2209.15 Section 12.29 (9/89) for equivalencies.

This reflects the amount of livestock grazing occurring on National Forest System lands. The information is also a direct tie to past measurements and provides continuity in reporting programs. Reporting livestock use also provides a comparison for the numbers permitted on an allotment, the numbers grazed, and the ecological status and trend of that allotment.

**Methods:** Livestock numbers are obtained from permittees actual use reports. Where these reports are not available, authorized numbers are reported. Livestock numbers and AUMs are also reported and calculated in RAMIS. Permitted AUMs are shown by grazing allotment on pages 160 to 163. The authorized and actual use will be shown annually.

The numbers are reported by the District Range Conservationists to the Forest RWSWM Staff who reviews and reports this information for the annual report.



## LANDS

Program Lands

Activity, Practice or Effect Permitted Nonrecreation Special Uses - General

Activity Code JL122 MAR Number \_\_\_\_\_

Unit of Measure Number of Permits

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Engineering Staff

**Description:** Permitted nonrecreation special uses (e.g. hydropower, irrigation ditches, telecommunications, utilities, off-claim mining facilities, exclusive use roads) will be monitored annually. These permits will be monitored for adequacy to identify the need for revision or corrective action.

There will be further evaluation and/or change in management direction if 10 percent or more of reviewed permits require revision or corrective action.

**Methods:** Monitoring of all nonrecreation special use permits will be done annually by either a desk audit (review of the permit) and/or site inspection. Desk audits should identify the need for more intensive site inspections.

The Forest Lands Specialists is responsible for accomplishing, evaluating and reporting this monitoring.

Program Lands

Activity, Practice or Effect FERC Licenses and Permits

Activity Code JL122 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Every six months

Reporting Period Annual

Responsible Official(s) Engineering Staff

**Description:** The number of Federal Energy Regulatory Commission (FERC) Licenses and Permits reviewed each year and the time it takes to review them will be monitored. FERC Licenses and Permits are required for any hydropower proposals on the Forest.

There will be further evaluation and/or change in management direction if there is failure to meet time limits on more than 10 percent of project comments and 4(e) reports.

**Methods:** Monitoring will consist of a Status Report that lists each FERC application and review time.

The Forest Lands Specialist is responsible for accomplishing, evaluating and reporting this monitoring.

Program Lands

Activity, Practice or Effect Property Boundary Location and Maintenance

Activity Code JL24/JL231 MAR Number 33.0

Unit of Measure Miles of Property Boundary Inventoried

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system MAR

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff

**Description:** The location and maintenance of property boundaries will be monitored annually on the Forest. The goal is to complete surveying and posting of all Forest property boundaries by the year 2020 and to survey and post as needed for timely response in cases of known or suspected encroachment on Forest Service lands.

Maintenance of posted lines should be on a regularly scheduled basis to minimize loss of investment over time. Posted lines will be inspected after surface disturbing projects and project-damaged lines will be refurbished.

There will be further evaluation and/or change in management direction if there is failure to meet at least 90 percent of programmed targets.

**Methods:** The miles of property boundary inventoried annually will be reported in the Management Attainment Report (MAR).

The Forest Lands Specialist is responsible for accomplishing, evaluating and reporting this monitoring.

Program Lands

Activity, Practice or Effect Land Exchange

Activity Code JL263 MAR Number 31.0 and 32.0

Unit of Measure Acres of Land Exchange

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Management Attainment Report

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Engineering Staff

**Description:** The number of acres of land exchange will be monitored annually on the Forest. Land exchange is done to acquire non-Federal properties within classified and proposed Wilderness and Wild and/or Scenic River corridors, to consolidate ownership ownership with the State of Idaho and to acquire needed administrative sites.

There will be further evaluation and/or change in management direction if within the five year reporting period the accomplishments are less than 50 percent of the Landownership Adjustment Plan.

**Methods:** The acres of land exchange accomplished annually will be reported in the Management Attainment Report (MAR).

The Forest Lands Specialist is responsible for accomplishing, evaluating and reporting this information.

Program Lands

Activity, Practice or Effect Right of Way (ROW) Aquisitions

Activity Code JL25 MAR Number 31.0 and 32.0

Unit of Measure Number of ROW Aquisitions

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Management Attainment Report

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period 5 years

Responsible Official(s) Engineering Staff

**Description:** The number of Right of Way (ROW) Aquisitions on the Forest will be monitored annually. Acquisition of roads and trails shall include existing Forest Transportation System roads and trails as well as project-related new construction.

There will be further evaluation and/or change in management direction if, for the 5 year reporting period, accomplishments are less than 20 percent of the Long-Range ROW Acquisition Plan.

**Methods:** The number of ROW Aquisitions will be reported annually in the Management Attainment Report (MAR).

The Forest Lands Specialist is responsible for accomplishing, evaluating and reporting this monitoring.

## **LAND MANAGEMENT PLANNING**

Program Land Management Planning

Activity, Practice or Effect NEPA Compliance

Activity Code ML MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Planning Staff

**Description:** An interdisciplinary team will review projects to assure that implementation complies with the NEPA document. Monitoring will occur on a minimum of one project per resource element, except for timber in which a minimum of two will occur.

This monitoring item will provide an assurance that activities that are identified during the environmental analysis phase are occurring on the ground. It will also highlight areas of needed improvement.

There will be further evaluation and/or change in management direction if there is a failure to implement direction established in the NEPA document or if the Forest fails to recognize that results are different than prescribed.

**Methods:** Following a review of the NEPA document an interdisciplinary team will review of the project to assess the compliance with the planned activities. The Forest Planning staff is responsible for coordinating and documenting the NEPA review.



Program Land Management Planning

Activity, Practice or Effect Forest Plan Costs

Activity Code ML MAR Number \_\_\_\_\_

Unit of Measure Dollars

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Planning, Programming and Information Staff

**Description:** Costs of implementing the Forest Plan will be monitored annually and compared to costs estimated in the Forest Plan.

Monitoring costs is required by the National Forest Management Act (NFMA) 36 CFR 219.12 (k)(3).

This information will be used not only to adjust budgets but also to provide a link to resource outputs and protection. For example, if the timber support for a resource is adequately funded but there is resource damage as the result of lack of timber support, managers should reevaluate the timber support costs.

There will be further evaluation and/or change in management direction if Primary Staff identifies a need to adjust Forest Plan costs.

**Methods:** Monitoring will consist of comparing annual actual expenditures by activity code, fund code and subunit to the Forest Plan Costs Guides. This information will be collected and stored in a database. The Forest Budget Analyst will be responsible for collecting, reviewing and reporting this information.

Program Land Management Planning

Activity, Practice or Effect Forest Related Total Employment

Activity Code ML MAR Number NA

Unit of Measure Jobs

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system TSPIRS/ARRS

Is this item published in the Plan, Chapter V No

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Planning, Program and Information Staff

**Description:** Forest related employment will be monitored annually. Communities adjacent to the National Forest rely upon the resource of the forest for providing goods and services to support the economic livelihood of the residents.

**Methods:** Forest related employment will be based upon Forest outputs such as timber, range, mining and recreation. The outputs are entered into a community specific model to project employment. Forest related employment associated with timber is reported annually for the Timber Sale Program Information Reporting System (TSPIRS). Other forest related employment will be reported annually with the upcoming All Resources Reporting System (ARRS).

The Forest Economist is responsible for collecting and reporting this information.

## **FACILITIES**

Program Facilities - Transportation Operations

Activity, Practice or Effect Road Operation/Management

Activity Code LT1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff

**Description:** Compliance with road and trail facility decisions will be monitored annually on the Forest. This monitoring will assure that road and trail facility decisions are implemented as predicted and that resources are protected.

There will be further evaluation and/or change in management direction if there is administrative failure to comply with previous road and trail facility decisions.

**Methods:** Monitoring will consist of a review of Inventory Records. The Forest Engineering Staff will annually review the records and prepare an annual report documenting compliance and noncompliance.

Program Facilities - Transportation Operations

Activity, Practice or Effect Road Maintenance System Operation

Activity Code LT1 MAR Number NA

Unit of Measure Miles

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff

**Description:** The type, frequency and miles of road maintenance activities which were accomplished using National Forest funds on National Forest system roads will be monitored. These activities are recorded by road number and maintenance level.

The road maintenance report is used for planning next years activities, budgeting, and as a record to track if the forest is maintaining roads to the desired level. A record of road maintenance is important in case of a tort claim against the Forest Service due to a vehicle accident.

This information will also be used to assess damage to soil and water resources in Soil and Water - Project Monitoring - Facilities - Impacts to Soil and Water Resources.

There will be further evaluation and/or change in management direction if there is a 15 percent deviation from projected outputs in any one year or a 5 percent deviation over any 5-year period.

**Methods:** The Forest Engineering Equipment Operator Foreman makes an annual work plan prior to the field season with coordination from the districts. The road crew records their accomplishments as they perform additional unplanned work. The work plans and recorded activities are returned to Equipment Operator Foreman at the end of the field season and become the **Annual Road Maintenance Accomplishment Report**.

Program Facilities - Transportation Operations

Activity, Practice or Effect Access Management

Activity Code LT1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Recreation, RWSWM and Engineering Staff and District Rangers

**Description:** Access management to protect resource damage will be monitored on the Forest annually. Access may be restricted to protect wildlife, soil, water and fish resources.

This monitoring item is tied to Wildlife - Seasonal Open Road Density and Long Term Road Access Management and Soil and Water - Project Monitoring - Facilities - Implementation of SWCPs and Impacts to Soil and Water Resources.

There will be further evaluation and/or change in management direction if there is administrative failure to immediately restrict or close use of areas to types of travel that are contributing significant, documentable resource damage.

**Methods:** Monitoring will consist of on-site inspections by Engineering Staff and Forest and Zone Resource Specialists. These inspections will be documented. The Forest Engineering Staff will review these documentations and prepare an annual report.

Program Facilities - Transportation Operations  
Activity, Practice or Effect Road Inventory  
Activity Code LT1 MAR Number NA  
Unit of Measure NA  
Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Transportation Information System (TIS)  
Is this item published in the Plan, Chapter V No  
Frequency Item is Monitored Annual  
Reporting Period Annual  
Responsible Official(s) Engineering Staff

**Description:** The road inventory consists of the TIS data base and the Transportation B-maps. The road inventory for system roads includes information such as; road name and number, maintenance level, mileage, jurisdiction, county, district, surface type, planned and existing management, design vehicle, RPA element served, and other related items. The B-maps show the locations of system roads.

The inventory of the system roads on the forest is required by the WO. The TIS data base can be used to generate reports and statistical summaries of road information. The B-maps keep track of the locations of the roads.

This information has a wide variety uses including; road closure orders, updating travel management plans, planning road maintenance activities, tracking open and closed roads, calculating haul costs for timber sales, calculating road maintenance deposits, issuing road use permits, updating forest visitors map and other uses as well.

**Methods:** The information for updating the forest road inventory will be gathered from transportations plans, the annual ROADS report, from district information, and various other sources. The Forest Engineering Staff is responsible for the annual updates.

Program Facilities - Transportation Operations

Activity, Practice or Effect Transportation Improvements Planning and System Development - Appropriated Roads Constructed and Reconstructed

Activity Code LT223 MAR Number 35.1

Unit of Measure Miles & Dollars

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system Road Analysis and Display System (ROADS)

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Officials Engineering Staff

**Description:** The miles and cost of constructed and reconstructed roads will be monitored annually. The miles and costs will be broken down by appropriated funds (contract, force account or cooperative venture) and Management Areas.

This monitoring is required by the Washington Office. This information will also be used to check assumptions made in the FORPLAN model regarding cost and miles of roads constructed.

There will be further evaluation and/or change in management direction if there is a 25 percent deviation from projected outputs in any one year or a 10 percent deviation over any 5-year period.

**Methods:** This information is gathered by Engineering Staff annually. The data is from the ROADS report prepared annually by the Forest Supervisory Civil Engineer who oversees the road construction program.



Program Facilites - Transportation Operations

Activity, Practice or Effect Timber Purchaser Roads Constructed

Activity Code LT223 MAR Number 35.3

Unit of Measure Miles & Dollars

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system Road Analysis and Display System (ROADS)

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

This Document Prepared by Engineering Staff on 11/89

**Description:** The miles and cost of roads constructed and reconstructed by timber purchase, or turned back to the Forest Service for completion will be monitored annually by Management Area.

This monitoring is required by the Washington Office. This information will also be used to check assumptions made in the FORPLAN model regarding cost and miles.

There will be further evaluation and/or change in management direction if there is a 25 percent deviation of projected outputs over one year or a 10 percent deviation over a 5-year period.

**Methods:** This information is gathered by the Engineering Staff annually. The data is from the ROADS report prepared annually by the Forest Supervisory Civil Engineer who oversees the road construction program.

Program Facilities - Facilities Operations

Activity, Practice or Effect Buildings and other Structures

Activity Code LF1 Structures MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff and District Rangers

**Description:** All buildings and other structures are monitored on the Forest. monitored as an ongoing activity.

The structures are monitored for compliance to the Uniform Building Code, Uniform Plumbing Code, Uniform Mechanical Code, National Electrical Code, and National Fire Code. All existing buildings, new construction, and remodel projects must meet all of these codes as well as any local building requirements. Any structures that don't meet this codes will have to be repaired.

There will be further evaluation and/or change in management direction if there is administrative failure to act on Forest or authorized buildings or structures that pose a threat to public health and safety as determined by violation of applicable building codes and fire protection requirements.

**Methods:** Monitoring for this activity will be accomplished by on-site visits. This is an ongoing activity. The Districts visit each site periodically as part of the maintenance responsibilities. All new and remodel projects are prepared or reviewed by the Forest and Regional Engineers. The Facilities Engineer visits each site once every three years to for building condition surveys. A copy of the deficiencies compiled during the survey is sent to district for repair. The Forest Engineer keeps records of all buildings and is responsible for preparing an annual report.

Program Facilities - Facilities Operations

Activity, Practice or Effect Potable Water Supply

Activity Code LF1 MAR Number \_\_\_\_\_

Unit of Measure Water Quality Measures

Is this item also tracked in another automated system? Yes If yes,

what is the name of the system Potable Water Inventory and....

Is this item published in the Plan, Chapter V No

Allowable Variability None

Frequency Item is Monitored Monthly (During system operating period)

Reporting Period Annual

Responsible Official(s) Engineering Staff and District Rangers

**Description:** Potable water systems on the Forest will be monitored. Monitoring will be for bacteria in the drinking water at each site. A high number of some bacteria will cause illness and some rare cases even death. Test results determine the water quality.

There are 35 water systems on Forest. Following is a list of the systems monitored in this activity

Bear Work Center	Bear G.S.
Hornet G.S.	Cabin Creek C.G.
Evergreen C.G.	Lafferty C.G.
Huckleberry C.G.	Big Flat C.G.
Mann Creek G.S.	Brownlee G.S.
Paradise-Justrite C.G.	Spring Creek C.G.
Brownless C.G.	Price Valley G.S.
Hard Creek G.S.	Cold Springs C.G.
Grouse C.G.	Hazard Lake C.G.
Last Chance C.G. Well #1	Last Chance C.G. Well #2
Last Chance C.G. Well #3	Burgdorf G.S.
Lake Fork G.S.	Paddy Flat G.S.
Warren G.S.	South Fork G.S.
Upper Payette Lake C.G.	Big Creek G.S.
Chamberlain G.S.	Cold Meadows G.S.
Lower Krassel G.S.	Upper Krassel G.S.
Ponderosa C.G.	Buckhorn C.G.
South Fork Water Stop	

C.G. = Campground      G.S. = Guard Station

There will be further evaluation and/or change in management if there is administrative failure to make any Forest water system unavailable for public

consumption that does not comply with the Idaho Department of Health and Welfare requirements.

**Methods:** Water samples will be taken monthly and at the opening of each system. Samples will be taken by Forest Service personnel and sent to a qualified lab for evaluation. A qualified lab is approved by both the Environmental Protection Agency (EPA) and the Idaho Department of Health and Welfare (IDHW). Water quality standards are determined by EPA's **Primary Drinking Water Regulations** and the IDHW's **Regulations for Public Drinking Water Systems** by direction of the Safe Drinking Water Act.

The results are reviewed and compiled by the Forest Facilities Engineer and the State Health District.

Program Facilities - Facility Operations

Activity, Practice or Effect Pollution Control Facilities

Activity Code LF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff and District Rangers

**Description:** Pollution Control Facilities are defined, but not limited to water, waste water, buildings, effluents, and solid waste systems.

The Forest Facilities are monitored for compliance to Clean Water Act, Safe Drinking Water Amendment of 1977, Federal Compliance With Pollution Control Standards (Executive Order 12088), and Environmental Protection Agency Regulations. The Forest also monitors for compliance to local and State Environmental laws. Any failure to meet any of these standards requires immediate repair or closure.

There will be further evaluation and/or change in management direction if there is administrative failure to restrict use or to temporarily or permanently close Forest pollution control facilities that do not comply with State of Idaho regulations.

**Methods:** Monitoring is completed by site surveys performed by an engineer. Monitoring is accomplished by both Engineering and District surveys. This is an ongoing Forest activity. All major sites are visited every three years.

A formal report is made identifying any problems and some recommended maintenance solutions. The District is responsible for repairing the problem. All Pollution Control Facilities are monitored by District personnel every week during each field season as part of operation and maintenance responsibilities. The Forest Engineer is responsible for compiling, reviewing and preparing a summary report of the information.

Program Facilities - Facilities Operations

Activity, Practice or Effect Water Storage and Transmission

Activity Code LF1 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Engineering Staff and District Rangers

**Description:** Dams are monitored on the Forest for safety. There are 11 special use dams on forest and no forest maintained dams. Following a list of those dams which are being monitored.

Boulder Lake	Fall Creek	Lost Valley Reservoir
Granite Creek	Lower Hornet	Box Lake
Upper Payette Lake	Shaw Twin Lake	Upper Hornet
Brundage Reservoir	Goose Lake	

The dams are visited yearly by either Forest Service and/or State Engineers. This is a ongoing activity for the Forest.

There will be further evaluation and/or change in management direction if there is administrative failure to promptly repair or remove from service any Forest or authorized dam having deficiencies which seriously affect the integrity of the structure.

**Methods:** All the dams are monitored by an on-site inspection yearly with the exception of Lower Hornet, Upper Hornet, and Box Lake. These dams are visited every other year because they are classified as a moderate hazard potential. The inspections identify any failure potential which can be corrected by minor maintenance. Major repairs requires a engineering evaluation prior to any work and usually the storage capacities are restricted until repairs are completed. Inspection reports are sent to the permittee to complete the required work. These repairs are monitored by Districts. The inspection reports are compiled by both the Forest Engineer and the Idaho Department of Water Resources.

**AIR**

Program Air

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Activity, Practice, or Effect Air Quality - Visual Range

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Activity Code FA121 MAR Number NA

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Unit of Measure Standard Visual Range (SVR)

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes

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Frequency Item is Monitored Three pictures a day from June 1 to October 31

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Reporting Period Annual

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Responsible Official(s) RWSWM Staff and Council District Ranger

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**Description:** Visual Quality in the Class I Hells Canyon Wilderness airshed will be monitored as required by Clean Air Act Amendments of 1977 Sections 160 (2) and 162 (2). The objectives of monitoring the visual range is to establish baseline visual record of visibility events and quantitative standard visual range for the Class I airshed within the Hells Canyon Wilderness.

The Automatic Camera Visibility site will be located on Horse Mountain on the Council Ranger District. The visibility target, Hat Point, is 35 kilometers away in the Hells Canyon Wilderness Class I airshed.

There will be further evaluation and/or change in management direction if the visibility does not meet the Limits of Acceptable Change.

**Methods:** The source of the monitoring data will come from automatic camera photographs of visibility target. There will be three pictures taken a day at 0900, 1200, and 1500 hours from June 1 through October 31. The Horse Mountain fire lookout will be responsible for changing and mailing the film.

The slides will be stored with a nationwide contractor, Air Resource Specialist, Inc. The contractor will make a determination of actual visual events and provide a quantification of standard visual range. A floppy disk containing all data will be provided to the Forest.

Quantitative analysis will identify weather conditions, observed hazes or plumes, and visibility target illumination conditions. Quantitative analysis will include: Site specification summary; slide and scenic contrast; Standard visual range (SVR) for each day, and time as well as daily geometric mean SVR; monthly plots of daily maximum, minimum and geometric mean SVR.

All data will be presented and summarized in a summer and fall seasonal progress report prepared by the contractor. The Forest Hydrologist will be responsible for reviewing and compiling the reports.



Program Air

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Activity, Practice, or Effect Air Quality - Particulate Matter

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Activity Code FA121 MAR Number NA

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Unit of Measure Particulate Matter (<10 microns)

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes

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Frequency Item is Monitored Annual

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Reporting Period Annual

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Responsible Official(s) RWSWM Staff and District Rangers

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**Description:** Particulate matter (<10 microns) will be monitored in critical areas. Monitoring particulate matter will provide baseline information to characterize the resource and determine trends in air particulates in airsheds.

There will be further evaluation and/or change in management direction if the particulate matter in the air does not meet the Limits of Acceptable Change (LAC).

**Methods:** Particulate monitors will be installed in critical areas. Baseline conditions will also be evaluated during project monitoring of prescribed burns.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The Forest Hydrologist is responsible for accomplishing, evaluating and reporting this information.

Program Air

Activity, Practice, or Effect Air Quality - Alkalinity

Activity Code FA121 MAR Number NA

Unit of Measure pH

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Alkalinity of acid sensitive lakes on the Forest will be monitored. The objectives of monitoring alkalinity is to provide baseline data to characterize the existing conditions of pH levels in lakes and determine trends over time to assess acid deposition from percipitation. Acid deposition can affect the physiology of aquatic life.

There will be further evaluation and/or change in management direction if the alkalinity does not meet the Limits of Acceptable Change.

**Methods:** Monitoring will consist of chemical analysis of a grid network of acid sensitive lakes on the Forest at overturn or other specified intervals.

Specific locations and techniques will be described when funding is obtained for this monitoring item. Emphasis will be placed upon lakes in the Frank Church--River of No Return and Hells Canyon Wilderness airsheds.

The Forest Hydrologist is responsible for accomplishing, evaluating and reporting this monitoring item.

Program Air

Activity, Practice, or Effect Air Quality - Acid Deposition

Activity Code FA121 MAR Number NA

Unit of Measure pH

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** Acid deposition upwind of critical airsheds and/or sensitive lakes will be monitored. The objectives of monitoring acid deposition is to provide baseline data to characterize the existing conditions of pH levels in airsheds and determine trends over time to assess if pH levels are changing in the airsheds. Acid deposition can affect the physiology of terrestrial vegetation and aquatic life.

There will be further evaluation and/or change in management direction if the acid deposition does not meet the Limits of Acceptable Change (LAC).

**Methods:** Acid deposition monitor(s) at upwind boundary of critical airshed(s) or sensitive lake(s) will be installed. Wet and dry acid deposition will be evaluated and correlated with data from adjacent areas.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The Forest Hydrologist is responsible for accomplishing, evaluating and reporting this monitoring.

Program Air - Project Monitoring - Protection

Activity, Practice or Effect Smoke Management from Prescribed Burns

Activity Code RZ9 MAR Number NA

Unit of Measure Visual Range and Particulates

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM, Fire and Timber Staff and District Rangers

**Description:** The effects of prescribed burning of fuels on air quality will be monitored for a sample of projects annually.

There will be further evaluation and/or change in management direction if there is nonattainment of Air Standards and Guidelines on more than 20 percent of prescribed burning activities.

**Methods:** Monitoring will consist of evaluating the visual range and particulate matter emissions from prescribed burns. This will be accomplished by taking before, during and after visual range photographs and installing particulate matter monitors on a representative sample of projects.

Locations and more specific techniques will be described when funding is obtained for this monitoring item.

The Forest Hydrologist is responsible for accomplishing and reporting this monitoring.

## MINERALS

Program Minerals

Activity, Practice or Effect Administration of 1872 U.S. Mining Laws Surface Use Regulations (35 CFR 228)

Activity Code GM11/GM12 MAR Number NA

Unit of Measure NA

Is this item also tracked in another automated system? No If yes,

what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Varies according to bond amount (See Below)

Reporting Period Annual

Responsible Official(s) RWSWM Staff and District Rangers

**Description:** Administration of the 1872 Mining Act Surface Use Regulations will be monitored for all mining projects. Monitoring frequency varies according to bond amount; for bonds of greater than \$100,000 monitoring will occur once a week, bonds with a value between \$15,000 to \$100,000 monitoring will occur at least once a month and for bonds less than \$15,000 monitoring will occur at least once per operating season. Monitoring will occur throughout the operating season.

The objective of monitoring this item is to insure that Regulations designed to mitigate adverse impacts and assure authorized occupancy of claims are being implemented.

There will be further evaluation and/or change in management direction of the Forest's minerals programs if there is unreasonable and unnecessary damage to surface resources, unauthorized occupancy of claims, or insufficient bonding occurs due to lack of funding and/or manpower to respond to all proposals.

**Methods:** Operating Plan and Regulation Compliance Inspections will be performed for all mining projects by District personnel. A **Documentation of Inspection of Mining Operation** form will be completed for all inspections. The frequency will vary according to the bond amount as listed above. The results of the monitoring will be supplied to the Forest Minerals Specialist who will compile an annual report and assess the level of compliance.

Program Minerals

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Activity, Practice or Effect Number of Operating Plans

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Activity Code GM11/GM12 MAR Number 14.0

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Unit of Measure Number of Operating Plans

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V Yes

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Frequency Item is Monitored Quarterly

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Reporting Period Annual

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Responsible Official(s) RWSWM Staff and District Rangers

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**Description:** The number of new and existing Mineral Operating Plans will be monitored annually. The primary use of the information is to assess budget and workload planning for the Minerals Staff.

There will be further evaluation and/or change in management direction of the Forest's mineral program if there is unreasonable and unnecessary damage to surface resources, unauthorized occupancy of claims, or insufficient bonding occurs due to lack of funding and/or manpower to respond to all proposals.

**Methods:** The number of Mineral Operating Plans will be reported annually in the Management Attainment Reports (MAR) that are prepared quarterly by the Districts. The Forest Minerals Specialist will review the reports and assess these in terms of budget and workload.

Program Minerals

Activity, Practice or Effect Number of Proposals

Activity Code GM11 MAR Number NA

Unit of Measure Number of Proposals

Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) RWSWM Staff

**Description:** The number, complexity and time for review of mining proposals on the Forest will be monitored annually. The primary use of this information is to assess workload and budget of the Forest Minerals Staff. Also, the information will be used to assure that proposals are reviewed in a timely manner.

There will be further evaluation and/or change in management direction if review time frames exceed maximums established by 36 CFR 228 due to lack of funding or manpower to respond adequately.

**Methods:** The source of the mining proposal review information will come from the Forest's Operating Plan Logs that are kept by the Districts. The Districts will supply the information to the Forest Minerals Specialist who will review the reports and assess these in terms of budget and workload.



Program Minerals

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Activity, Practice or Effect Mining Claim Habitable Structures

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Activity Code GM11 MAR Number NA

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Unit of Measure NA

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V No

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Frequency Item is Monitored Annual

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Reporting Period Annual

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Responsible Official(s) RWSWM Staff

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**Description:** The status of the validity of mining claims habitable structures on the Forest will be monitored annually. The structures should be included in the Plan of Operations for the mine and reviewed periodically to assure that the structure is necessary for operations.

If not included in the Plan of Operations, action should be taken on the structure. Actions could consist of:

- 1) requesting that the claimant verifies the need of the structure for the mining activity and, if needed, include in the Plan of Operations;
- 2) if not necessary for the mining activity the structure should be a) allowed to deteriorate naturally but prevent unauthorized occupancy from occurring, b) destroyed by the claimant or use bond money to destroy.

National direction requires that forest's resolve trespasses. Regional direction elaborates that forest's will inventory trespasses in order to define the workload necessary to resolve the trespasses. The primary use of this information is to assess the budget and workload of the Minerals Staff.

**Methods:** Districts will monitor mining claim habitable structures on the Forest annually. They will report occupancy and condition to the Forest Minerals Specialist who will take the necessary action. The Mining Claim Habitable Structure Inventory is updated by the Forest Minerals Specialist. The inventory describes the status of the structure, proposed action and progress. The Forest Minerals Specialist will annually prepare a report summarizing the status in order to identify budget and workload.

Program Minerals

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Activity, Practice or Effect Reclamation of Disturbed Lands

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Activity Code GM11/GM12 MAR Number NA

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Unit of Measure Acres

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Is this item also tracked in another automated system? No If yes,  
what is the name of the system NA

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Is this item published in the Plan, Chapter V No

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Frequency Item is Monitored Annual

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Reporting Period Annual

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Responsible Official(s) Minerals Staff

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**Description:** Reclamation information will be monitored annually for all mineral activities with a current Plan of Operations. This information is required for the **Minerals Workload/Accomplishment Report** that is prepared annually for the Regional Office. The Minerals Program Managers Guide of the Intermountain Region requires reclamation of 80 percent of the disturbed land that is available for reclamation.

This information will be used to assess mining activity reclamation backlog and to assure reclamation of disturbed areas. It will also be used to assess the Minerals Staff's workload and to assure that budgets are adequate to implement reclamation.

There will be further evaluation and/or change in management direction if the amount of reclamation is less than the 80 percent of the disturbed land that is available for reclamation.

**Methods:** District Minerals Specialists will measure currently disturbed acres and reclaimed acres at each mining site. The following information will be collected in this monitoring activity:

1. All currently disturbed lands within a current Plan of Operations that have not been reclaimed or received reclamation treatment.
2. All disturbed lands with a Plan of Operations that are available for reclamation treatment (no longer needed for mining).
3. Acres treated as prescribed in the reclamation plan including non-reclaimable acres such as pits, highwalls, etc.

The Forest Minerals Specialist will review the reports and assess these in terms of budget and workload.

## **PROTECTION - FIRE**

Program Protection - Fire

Activity, Practice or Effect Wildfire Acres Burned

Activity Code PF12 MAR Number NA

Unit of Measure Acres

Is this item also tracked in another automated system? Yes If yes,  
what is the name of the system FIRESTAT

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Fire Staff

**Description:** The frequency by size, intensity level and distribution of all wildfires will be monitored.

This information is generally kept for statistical and historical purposes, but can also result in additional evaluation and analysis of the Forest fire organization if trends indicate a deviation of 25 percent from the projected cumulative 5-year average wildfire burned acres.

**Methods:** The information on wildfires will be obtained from 5100-29 fire reports that are prepared for each fire and submitted electronically and/or hard copy from the Districts to the Forest dispatch office and eventually stored in a central computer base in FCCC. The area for analysis is Fire Management Analysis Zones for the entire forest based from the National Fire Management Analysis System. The Forest Fire Staff will prepare an annual report assessing the wildfire situation for that year.

Program Protection - Fire

Activity, Practice or Effect Activity Fuel Treatment

Activity Code PF25 MAR Number 16.3

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,  
what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Fire Staff and District Rangers

**Description:** The acres of activity fuels treated on all timber sale will be monitored as designated in the Slash Disposal Plan and Burning Plan. This information is monitored primarily to assess target accomplishments and the effects of fire on different sites.

Information will be used to assist the decision maker in selecting a treatment alternative for slash disposal. The Forest Plan requires that cut-over units to be adequately treated to allow for natural and/or artificial plantings.

There will be further evaluation and/or change in management direction if there is a deviation of greater than 25 percent from the programmed targets of activity fuels treatment. The programmed targets vary by year.

**Methods:** District's Fire Staff will prepare post burn records for every timber sale. This information will be incorporated into the annual accomplishment reports by treatment method and acres treated. The treatment method is generally broadcast, underburn or pile burning. District and Forest specialists will conduct random reviews to monitor fire effects on resources and vegetation. The Forest Fire Staff is responsible for compiling the information and preparing the annual report.

Program Protection - Fire

Activity, Practice or Effect Natural Fuel Improvements

Activity Code PF24 MAR Number 16.2

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,

what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual

Reporting Period Annual

Responsible Official(s) Fire Staff, District FMOs, SO Wildlife Biologist and District Rangers

**Description:** Natural fuel improvement projects that are accomplished primarily for fuels reduction will be monitored forestwide. Monitored projects include those that are combined with the Wildlife Habitat Improvement burns.

This information will be used to evaluate fire effects and determine if Forest Plan objectives are being met and for target attainment. Monitoring should assist managers in making future decisions of fuel treatment projects by determining effectiveness projects for fuel reduction.

There will be further evaluation and/or change in management direction if there is a deviation of 25 percent from programmed objectives.

**Methods:** The information for monitoring the natural fuels reduction achievements will be obtained from Environmental Analysis documents, compliance reviews, post-burn evaluation forms, Management Attainment Accomplishment (MAR) reports, on-site inspections and unit costs. The Forest Fire Staff, Forest Wildlife Biologist, District Rangers and District Fire Management Officers are responsible for compiling this information. The Forest Fire Staff will summarize the information and prepare an annual report.

Program Protection - Fire

Activity, Practice or Effect Prescribed Fires Unplanned Ignitions

Activity Code PF24 MAR Number NA

Unit of Measure Acres

Is this item also tracked in another automated system? No If yes,

what is the name of the system \_\_\_\_\_

Is this item published in the Plan, Chapter V Yes

Frequency Item is Monitored Annual 100% of all prescribed fires

Reporting Period As needed

Responsible Official(s) District FMOs and District Rangers

**Description:** Unplanned ignitions of prescribed fires (escaped fires) will be monitored forestwide. All prescribed fires will be monitored for achieving prescriptions. This information is monitored to assure that fire prescriptions are adequate and, if not adequate, adjustments can be made to the prescription.

There will be further evaluation and/or change in management direction if a prescribed fire exceeds the prescription or is changed to a wildfire status.

**Methods:** Unplanned ignitions of prescribed fires will be monitored with surveillance of the fire and a review of the fire prescription to assure compliance with the area's objectives. The District Fire Management Officers (FMOs) will monitor the fire activity for every prescribed fire and report the information to the Forest Fire Staff who will assess whether the activity falls within the prescription. The Forest Fire Staff will prepare the annual report.